

**From:** [Wilson, Ashley](#)  
**To:** [Wagner, Christine](#)  
**Cc:** **Non-responsive based on revised scope**  
**Subject:** Case# 47768, SDG# C0AB7 - Validated Data for Shiloh Church Road Site  
**Date:** Friday, September 21, 2018 3:50:00 PM  
**Attachments:** [47768 COAB7 ltr.pdf](#)  
[image001.png](#)  
[47768 COAB7 SSR.pdf](#)  
[EQuIS 1\\_47768\\_COAB7\\_Validated.xls](#)  
[EQuIS 2\\_47768\\_COAB7\\_Validated.xls](#)  
[EQuIS 3\\_47768\\_COAB7\\_Validated.xls](#)  
[EQuIS\\_47768\\_COAB7\\_Validated.xls](#)  
[47768 COAB7 DVR.pdf](#)

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Christine Wagner  
US EPA Region 3  
1650 Arch Street  
Philadelphia, PA 19103-2029

Christine,

Attached to this message you will find electronic files containing the validation report and validated data for Shiloh Church Road Site, Case# 47768, SDG# C0AB7. The validation of this case was completed by the Region III Environmental Services Assistance Team (ESAT).

Please contact ESAT's RPO, Brandon McDonald by phone at 410-305-2607 or e-mail at [McDonald.BRANDON@epa.gov](mailto:McDonald.BRANDON@epa.gov) if additional assistance is needed.

TO # 0002                    TDF # 0818117



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Ashley Wilson | Research Technician | 410-305-3013 | [Wilson.Ashley@epa.gov](mailto:Wilson.Ashley@epa.gov)  
ICF | 701 Mapes Road, Fort Meade, MD 20755-5350



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
Environmental Sciences Center  
701 Mapes Road  
Fort Meade, Maryland 20755-5350

DATE: 9/21/2018

SUBJECT: Region III Data QA Review

FROM: Brandon McDonald   
Region III ESAT RPO(3EA22)

TO: CHRIS WAGNER  
Hazardous Site Cleanup Division (HSCD)

Attached is the data validation report for the SHILOH CHURCH ROAD SITE site for RAS# 47768; SDG# C0AB7 completed by the Region III Environmental Services Assistance Team (ESAT) contractor, ICF International, under the direction of Region III EAID.

If you have any questions regarding this review, please call Brandon McDonald at (410) 305-2607 or you can call Eric Graybill at (410)-305-2665.

Attachment

cc:

WESTON SOLUTIONS)  
(WESTON SOLUTIONS)

TO: #0002 TDF: #0818117

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ICF  
ESAT Region 3  
US Environmental Protection Agency Environmental Science Center  
701 Mapes Road Ft. Meade, MD 20755-5350  
Phone 410-305-3012

**Date:** September 19, 2018

**To:** Brandon McDonald  
ESAT Region 3 Project Officer

**From:** Non-responsive based on revised scope  
Validator

**Subject:** Non-responsive based on revised scope  
Reviewer

**Organic Data Validation (S4VEM)**  
Shilo Church Road  
47768, COAB7

### Overview

This data package consisted of nine (9) soil samples including a field duplicate pair analyzed for semivolatile and Aroclor analytes.

Analyses were performed by Chemtech Consulting Group (CHM) according to Contract Laboratory Program (CLP) Statement of Work (SOW) SOM02.4.

Data were validated according to the National Functional Guidelines for Organic Superfund Methods Data Review and applicable USEPA Region 3 modifications. Electronic validation was performed by the Electronic Data eXchange & Evaluation System (EXES). The validation report has been assigned the Superfund Data Validation Label S4VEM (Stage\_4\_Validation\_Electronic\_Manual).

The following validation narrative is an evaluation of laboratory reported data based on the electronic data package available through the EXES Data Manager dated August 16, 2018.

### Summary

Significant data quality outliers regarding Deuterated Monitoring Compounds (DMC) recoveries were identified that resulted in rejection of sample results in two semivolatile samples. Less significant data quality outliers were identified resulting in estimation of sample results including but not limited to calibration precision in semivolatiles and surrogate recoveries in Aroclors as detailed below.

**Major Problem**

Recoveries of the following DMCs were <10% in semivolatile samples listed. No positive results were reported for analytes associated with these DMCs in these samples. Quantitation limits for analytes associated with these DMCs in samples listed have been rejected and qualified "R".

Sample	DMC	Affected analytes
COAB7	4-Nitrophenol-d <sub>4</sub>	2-Nitroaniline, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 4-Nitroaniline
COAD2	1,4-Dioxane-d <sub>8</sub>	1,4-Dioxane

**Minor Problems**

The following analytes failed Percent Difference (%D) in continuing calibration listed. Positive results and quantitation limits for these analytes in samples associated with this calibration are estimated and have been qualified "J" and "UJ", respectively.

Fraction	Standard ID	Affected Analytes	Associated Samples
Semivolatile	SSTD02057	Fluoranthene, butylbenzylphthalate	COAB7, COAC7, COAC8, COAC9, COAD0, COAD2
Semivolatile	SSTD02057	bis(2-Ethylhexyl)phthalate	COAB7, COAC7, COAC8, COAC9, COAD0, COAD2, COAB9

Recovery of surrogate decachlorobiphenyl (DCB) was outside the lower control limit on one column in Aroclor sample COAB9. No positive results were reported for this sample. Quantitation limits for Aroclors in this sample have been qualified "UJ".

**Notes**

Detected concentrations for target analytes less than Contract Required Quantitation Limit (CRQL) are estimated and have been qualified "J".

Laboratory blanks were free of contamination in both fractions.

Concentrations for the following analytes exceeded the calibration range in the initial analysis of samples listed below. These samples were reanalyzed at dilutions listed in order to quantitate these analytes within the calibration range. Results for these analytes are reported from the dilutions. There is no indication that these exceedance issues impacted subsequent sample analyses.

Fraction	Sample	DF	Analyte
Semivolatile	COAB9	2X	bis(2-Ethylhexyl)phthalate
Aroclor	COAC7	200X	Aroclor 1254
	COAC8	20X	Aroclor 1254
	COAC9, COAD2	400X	Aroclor 1254
	COAD0	10X	Aroclor 1254
	COAD1	20X	Aroclor 1254, Aroclor 1260

Surrogates were diluted out in the diluted analysis of Aroclor samples. No data were qualified based on surrogate recoveries in the diluted samples.

Aroclor results with a percent difference (%D) >25% between the two analytical columns have been qualified "J".

The chromatogram of Aroclor sample COAB9 showed high concentrations of non-target interfering analytes. Laboratory reported that no Aroclors could be identified in this sample.

High concentrations of Aroclors were also reported in semivolatile samples as Tentatively Identified Compounds (TICs).

Recoveries of spiked Aroclors in Laboratory Control Samples (LCS) were within control limits.

Results for the field duplicate pair, samples COAC7/COAD2, were comparable except for bis(2-ethylhexyl)phthalate in semivolatile fraction and Aroclor 1254 in Aroclor fraction. Data are not qualified based on field duplicate precision.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample COAD2 reported recoveries of spiked analytes outside the upper control limits. These outliers may be attributed to the high concentration of Aroclor 1254 in the parent sample interfering with spiked Aroclors. Relative Percent Differences (RPDs) were within control limits. No positive results were reported for Aroclor 1016 and 1260 in the parent sample. No data were qualified based on MS/MSD outliers.

Aroclor 1254, which was not spiked, was detected in sample COAD2 and the MS/MSD analyses of this sample. Results and precision estimates are listed below. Aroclor 1254 in sample COAD2 is reported from dilution while MS/MSD results are reported from initial analysis. Results which exceeded the calibration range in the MS/MSD have been qualified "J". No field data were qualified based on MS/MSD precision.

Concentration (ug/Kg)				
Analyte	COAD2	MS	MSD	%RSD
Aroclor 1254	210000	120000 J	120000 J	35

%RSD = Percent Relative Standard Deviation

Tentatively Identified Compounds (TICs) are not reviewed by data validators. The validation qualifiers are applied by EXES electronic validation based on laboratory qualifiers. By definition, all compounds identified as TICs should be treated as tentative identifications and all reported results should be considered estimated.

Manual integrations were performed and identified by the laboratory. A subset of these was evaluated by the reviewer, and were found to be accurate and consistent. No action was taken by the reviewer based on manual integrations.

**Glossary of Organic Data Qualifier Codes**


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<b>Validation Qualifiers</b>	In order of descending precedence. Only one of these qualifiers may apply to any result.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
<b>Additional Qualifiers</b>	Additional qualifiers may be combined with other qualifiers.
N	The analyte has been "tentatively identified" or "presumptively" as present.
B	The result is presumed a blank contaminant. This qualifier is used for drinking water samples only.
C	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatography/Mass Spectrometry (GC/MS). This qualifier may be added to other qualifiers.
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed. This qualifier may be added to other qualifiers.

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# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: ABLK42	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1221	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1232	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1242	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1248	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1254	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1260	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1262	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1268	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: ALCS42	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	45		ug/kg	45		1.0	YES	S4VEM
Aroclor-1221	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1232	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1242	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1248	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1254	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1260	Spike	42		ug/kg	42		1.0	YES	S4VEM
Aroclor-1262	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM
Aroclor-1268	Target	33	U	ug/kg	33	U	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AB7	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 09:19:00
% Moisture:		% Solids: 65.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1221	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1232	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1242	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1248	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1254	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1260	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1262	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM
Aroclor-1268	Target	51	U	ug/kg	51	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Sample Number: C0AB7	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 09:19:00
% Moisture:		% Solids: 65.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	100	U	ug/kg	100	U	1.0	YES	S4VEM
Benzaldehyde	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Phenol	Target	410	J	ug/kg	410	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
2-Chlorophenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2-Methylphenol	Target	98	J	ug/kg	98	J	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Acetophenone	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
4-Methylphenol	Target	420	J	ug/kg	420	J	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Hexachloroethane	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Nitrobenzene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Isophorone	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2-Nitrophenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Naphthalene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
4-Chloroaniline	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Caprolactam	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2-Nitroaniline	Target	260	R	ug/kg	260	U	1.0	YES	S4VEM
Dimethylphthalate	Target	160	J	ug/kg	160	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Acenaphthylene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
3-Nitroaniline	Target	510	R	ug/kg	510	U	1.0	YES	S4VEM
Acenaphthene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	510	R	ug/kg	510	U	1.0	YES	S4VEM
4-Nitrophenol	Target	510	R	ug/kg	510	U	1.0	YES	S4VEM
Dibenzofuran	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Diethylphthalate	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Fluorene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
4-Nitroaniline	Target	510	R	ug/kg	510	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Atrazine	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Pentachlorophenol	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Phenanthrene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Anthracene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Carbazole	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Fluoranthene	Target	350	J	ug/kg	350	J	1.0	YES	S4VEM
Pyrene	Target	410		ug/kg	410		1.0	YES	S4VEM
Butylbenzylphthalate	Target	260	UJ	ug/kg	260	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	110	J	ug/kg	110	J	1.0	YES	S4VEM
Chrysene	Target	410		ug/kg	410		1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	66	J	ug/kg	66	J	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	510	U	ug/kg	510	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	390		ug/kg	390		1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	130	J	ug/kg	130	J	1.0	YES	S4VEM
Benzo(a)pyrene	Target	99	J	ug/kg	99	J	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	74	J	ug/kg	74	J	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	260	U	ug/kg	260	U	1.0	YES	S4VEM
11H-Benzo[a]fluoren-11-one	TIC	120	J	ug/kg	120	J	1.0	YES	NV
n-Hexadecanoic acid	TIC	140	J	ug/kg	140	J	1.0	YES	NV
Benzo[b]naphtho[2,3-d]thiophene	TIC	110	J	ug/kg	110	J	1.0	YES	NV
Total Alkanes	TIC			ug/kg			1.0	YES	NV
o,p-DDT	TIC	150	J	ug/kg	150	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AB8	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/24/2018	Sample Time: 16:30:00
% Moisture:		% Solids: 42.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM
Aroclor-1221	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM
Aroclor-1232	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM
Aroclor-1242	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM
Aroclor-1248	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM
Aroclor-1254	Target	17	J	ug/kg	17	JP	1.0	YES	S4VEM
Aroclor-1260	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM
Aroclor-1262	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM
Aroclor-1268	Target	78	U	ug/kg	78	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Sample Number: C0AB8	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/24/2018	Sample Time: 16:30:00
% Moisture:		% Solids: 42.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	160	U	ug/kg	160	U	1.0	YES	S4VEM
Benzaldehyde	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Phenol	Target	1100		ug/kg	1100		1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
2-Chlorophenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2-Methylphenol	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Acetophenone	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
4-Methylphenol	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Hexachloroethane	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Nitrobenzene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Isophorone	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2-Nitrophenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Naphthalene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
4-Chloroaniline	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Caprolactam	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2-Nitroaniline	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Dimethylphthalate	Target	470		ug/kg	470		1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Acenaphthylene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
3-Nitroaniline	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Acenaphthene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
4-Nitrophenol	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Dibenzofuran	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Diethylphthalate	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Fluorene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
4-Nitroaniline	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Atrazine	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Pentachlorophenol	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Phenanthrene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Anthracene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Fluoranthene	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Pyrene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Chrysene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	780	U	ug/kg	780	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	400	U	ug/kg	400	U	1.0	YES	S4VEM
Total Alkanes	TIC	1100		ug/kg	1100		1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AB9	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 09:05:00
% Moisture:		% Solids: 49.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1221	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1232	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1242	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1248	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1254	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1260	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1262	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM
Aroclor-1268	Target	66	UJ	ug/kg	66	U	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AB9	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 09:05:00
% Moisture:		% Solids: 49.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	130	U	ug/kg	130	U	1.0	YES	S4VEM
Benzaldehyde	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Phenol	Target	560	J	ug/kg	560	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
2-Chlorophenol	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2-Methylphenol	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Acetophenone	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
4-Methylphenol	Target	88	J	ug/kg	88	J	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Hexachloroethane	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Nitrobenzene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Isophorone	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2-Nitrophenol	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	200	J	ug/kg	200	J	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Naphthalene	Target	160	J	ug/kg	160	J	1.0	YES	S4VEM
4-Chloroaniline	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	280	J	ug/kg	280	J	1.0	YES	S4VEM
Caprolactam	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2-Nitroaniline	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Dimethylphthalate	Target	310	J	ug/kg	310	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Acenaphthylene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
3-Nitroaniline	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Acenaphthene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
4-Nitrophenol	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Dibenzofuran	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Diethylphthalate	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Fluorene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
4-Nitroaniline	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Atrazine	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Pentachlorophenol	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Phenanthrene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Anthracene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Carbazole	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	1200		ug/kg	1200		1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Fluoranthene	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Pyrene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Chrysene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	5500	J	ug/kg	5500	D	2.0	YES	S4VEM
Di-n-octyl phthalate	Target	660	U	ug/kg	660	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	340	U	ug/kg	340	U	1.0	YES	S4VEM
Benzene, 1,4-dichloro-2-(2-chloroe	TIC	970	J	ug/kg	970	J	1.0	YES	NV
unknown-01	TIC	2400	J	ug/kg	2400	J	1.0	YES	NV
Naphthalene, 1,6-dimethyl-4-(1-met	TIC	1300	J	ug/kg	1300	J	1.0	YES	NV
Benzene, 1,3,5-trichloro-	TIC	6900	J	ug/kg	6900	J	1.0	YES	NV
2,11-Dioxabicyclo[4.4.1]undeca-3,5	TIC	3200	J	ug/kg	3200	J	1.0	YES	NV
p,p-DDE	TIC	4300	J	ug/kg	4300	J	1.0	YES	NV
Benzene, 1,4-dichloro-	TIC	1100	J	ug/kg	1100	J	1.0	YES	NV
o,p-DDT	TIC	6800	J	ug/kg	6800	J	1.0	YES	NV
Benzenesulfonyl chloride, 4-chloro	TIC	7400	J	ug/kg	7400	J	1.0	YES	NV
Benzene, 1,2-dichloro-	TIC	3000	J	ug/kg	3000	J	1.0	YES	NV
Mitotane	TIC	38000	J	ug/kg	38000	J	1.0	YES	NV
p,p-DDT	TIC	54000	J	ug/kg	54000	J	1.0	YES	NV
1,1-Dichloro-2,2-bis(p-chloropheny	TIC	59000	J	ug/kg	59000	J	1.0	YES	NV
Total Alkanes	TIC			ug/kg			1.0	YES	NV
2,6-Naphthalenedione, octahydro-1,	TIC	870	J	ug/kg	870	J	1.0	YES	NV
unknown-02	TIC	790	J	ug/kg	790	J	1.0	YES	NV
Dichloroacetic acid, heptadecyl es	TIC	700	J	ug/kg	700	J	1.0	YES	NV
2,5-Dichloro-3-nitrobenzoic acid	TIC	1300	J	ug/kg	1300	J	1.0	YES	NV
Decahydro-4,4,8,9,10-pentamethylna	TIC	600	J	ug/kg	600	J	1.0	YES	NV
unknown-03	TIC	590	J	ug/kg	590	J	1.0	YES	NV
unknown-04	TIC	740	J	ug/kg	740	J	1.0	YES	NV
m,p-DDD	TIC	660	J	ug/kg	660	J	1.0	YES	NV
Naphthalene, 1,2,3,4-tetrahydro-1,	TIC	530	J	ug/kg	530	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AC7	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 16:35:00
% Moisture:		% Solids: 63.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM
Aroclor-1221	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM
Aroclor-1232	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM
Aroclor-1242	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM
Aroclor-1248	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM
Aroclor-1254	Target	120000		ug/kg	120000	D	200.0	YES	S4VEM
Aroclor-1260	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM
Aroclor-1262	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM
Aroclor-1268	Target	52	U	ug/kg	52	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Sample Number: C0AC7	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 16:35:00
% Moisture:		% Solids: 63.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	100	U	ug/kg	100	U	1.0	YES	S4VEM
Benzaldehyde	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Phenol	Target	460	J	ug/kg	460	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
2-Chlorophenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2-Methylphenol	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Acetophenone	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
4-Methylphenol	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Hexachloroethane	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Nitrobenzene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Isophorone	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2-Nitrophenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Naphthalene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
4-Chloroaniline	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Caprolactam	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2-Nitroaniline	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Dimethylphthalate	Target	220	J	ug/kg	220	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Acenaphthylene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
3-Nitroaniline	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Acenaphthene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
4-Nitrophenol	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Dibenzofuran	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Diethylphthalate	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Fluorene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
4-Nitroaniline	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Atrazine	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Pentachlorophenol	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Phenanthrene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Anthracene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Carbazole	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	450		ug/kg	450		1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Fluoranthene	Target	110	J	ug/kg	110	J	1.0	YES	S4VEM
Pyrene	Target	140	J	ug/kg	140	J	1.0	YES	S4VEM
Butylbenzylphthalate	Target	290	J	ug/kg	290		1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	78	J	ug/kg	78	J	1.0	YES	S4VEM
Chrysene	Target	86	J	ug/kg	86	J	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	3200	J	ug/kg	3200		1.0	YES	S4VEM
Di-n-octyl phthalate	Target	520	U	ug/kg	520	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	94	J	ug/kg	94	J	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	73	J	ug/kg	73	J	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	270	U	ug/kg	270	U	1.0	YES	S4VEM
1,1-Biphenyl, 2,2,4,4,6-Pentach	TIC	990	J	ug/kg	990	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,4-tetrachlor	TIC	1300	J	ug/kg	1300	J	1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,6-pentach	TIC	2100	J	ug/kg	2100	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,4,5-pentach	TIC	1800	J	ug/kg	1800	J	1.0	YES	NV
2,2,3,4,5-Pentachloro-1,1-biphe	TIC	2200	J	ug/kg	2200	J	1.0	YES	NV
2,2,3,6,6-Pentachloro-1,1-biphe	TIC	2200	J	ug/kg	2200	J	1.0	YES	NV
2,3,3,5,5,6-Hexachloro-1,1-biph	TIC	970	J	ug/kg	970	J	1.0	YES	NV
2,2,3,4,5,6-Hexachloro-1,1-biphe	TIC	920	J	ug/kg	920	J	1.0	YES	NV
2,3,3,4,5-Pentachloro-1,1-biphen	TIC	720	J	ug/kg	720	J	1.0	YES	NV
1,1-Biphenyl, 2,2,5,5-tetrachlo	TIC	900	J	ug/kg	900	J	1.0	YES	NV
2,2,3,6-Tetrachloro-1,1-biphenyl	TIC	730	J	ug/kg	730	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4-Trichloro-	TIC	640	J	ug/kg	640	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,3,4,4-hexa	TIC	480	J	ug/kg	480	J	1.0	YES	NV
n-Hexadecanoic acid	TIC	580	J	ug/kg	580	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,5-tetrachlo	TIC	570	J	ug/kg	570	J	1.0	YES	NV
1,1-Biphenyl, 2,3,5,5-tetrachlo	TIC	450	J	ug/kg	450	J	1.0	YES	NV
2,3,3,4,5,6-Hexachloro-1,1-biph	TIC	330	J	ug/kg	330	J	1.0	YES	NV
2,2,3,4,4-Pentachloro-1,1-biphe	TIC	310	J	ug/kg	310	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,6-tetrachlor	TIC	370	J	ug/kg	370	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,4,6-Pentachl	TIC	290	J	ug/kg	290	J	1.0	YES	NV
1,1-Biphenyl, 2,2,4,5,5-pentach	TIC	280	J	ug/kg	280	J	1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,4,5-hexa	TIC	170	J	ug/kg	170	J	1.0	YES	NV
2,3,4,5-Tetrachloro-1,1-biphen	TIC	210	J	ug/kg	210	J	1.0	YES	NV
unknown-02	TIC	160	J	ug/kg	160	J	1.0	YES	NV
1,1-Biphenyl, 2,4,6-trichloro-	TIC	170	J	ug/kg	170	J	1.0	YES	NV
unknown-01	TIC	170	J	ug/kg	170	J	1.0	YES	NV
Total Alkanes	TIC	280		ug/kg	280		1.0	YES	NV
2,3,4,5-Tetrachloro-1,1-biphenyl	TIC	130	J	ug/kg	130	J	1.0	YES	NV
1(2H)-Naphthalenone, 3,4,4a,5,8,8a	TIC	130	J	ug/kg	130	J	1.0	YES	NV
(1R)-2,6,6-Trimethylbicyclo[3.1.1]	TIC	200	J	ug/kg	200	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,5-Tetrachlor	TIC	150	J	ug/kg	150	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AC8	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 16:55:00
% Moisture:		% Solids: 78.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1221	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1232	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1242	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1248	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1254	Target	12000		ug/kg	12000	D	20.0	YES	S4VEM
Aroclor-1260	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1262	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1268	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Sample Number: C0AC8	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 16:55:00
% Moisture:		% Solids: 78.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	85	U	ug/kg	85	U	1.0	YES	S4VEM
Benzaldehyde	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Phenol	Target	340	J	ug/kg	340	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
2-Chlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Methylphenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Acetophenone	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4-Methylphenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Hexachloroethane	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Nitrobenzene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Isophorone	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Nitrophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Naphthalene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Chloroaniline	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Caprolactam	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Nitroaniline	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Dimethylphthalate	Target	150	J	ug/kg	150	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Acenaphthylene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
3-Nitroaniline	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Acenaphthene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4-Nitrophenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Dibenzofuran	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Diethylphthalate	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Fluorene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Nitroaniline	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Atrazine	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Pentachlorophenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Phenanthrene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Anthracene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Carbazole	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Fluoranthene	Target	420	UJ	ug/kg	420	U	1.0	YES	S4VEM
Pyrene	Target	62	J	ug/kg	62	J	1.0	YES	S4VEM
Butylbenzylphthalate	Target	220	UJ	ug/kg	220	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Chrysene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	110	J	ug/kg	110	J	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	60	J	ug/kg	60	J	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
1,1-Biphenyl, 2,2,4,6,6-Pentach	TIC	100	J	ug/kg	100	J	1.0	YES	NV
Total Alkanes	TIC	150		ug/kg	150		1.0	YES	NV
1,1-Biphenyl, 2,2,5,5-tetrachlo	TIC	150	J	ug/kg	150	J	1.0	YES	NV
2,2-Bis(p-chlorophenyl)ethanol	TIC	130	J	ug/kg	130	J	1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,4,5-hexa	TIC	130	J	ug/kg	130	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,5,6-pentachlo	TIC	150	J	ug/kg	150	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,3,4,4-hexa	TIC	170	J	ug/kg	170	J	1.0	YES	NV
2,3,3,4,5-Pentachloro-1,1-biphen	TIC	190	J	ug/kg	190	J	1.0	YES	NV
unknown-01	TIC	200	J	ug/kg	200	J	1.0	YES	NV
2,2,3,5,6,6-Hexachloro-1,1-biph	TIC	200	J	ug/kg	200	J	1.0	YES	NV
n-Hexadecanoic acid	TIC	270	J	ug/kg	270	J	1.0	YES	NV
2,2,3,4,5,6-Hexachloro-1,1-biphe	TIC	260	J	ug/kg	260	J	1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,6-Pentachl	TIC	350	J	ug/kg	350	J	1.0	YES	NV
3,3,4,5,5-Pentachloro-1,1-biphe	TIC	280	J	ug/kg	280	J	1.0	YES	NV
2,2,3,4,6-Pentachloro-1,1-biphe	TIC	320	J	ug/kg	320	J	1.0	YES	NV
unknown-02	TIC	820	J	ug/kg	820	J	1.0	YES	NV
Octadecanoic acid	TIC	100	J	ug/kg	100	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AC9	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/26/2018	Sample Time: 08:40:00
% Moisture:		% Solids: 73.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM
Aroclor-1221	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM
Aroclor-1232	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM
Aroclor-1242	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM
Aroclor-1248	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM
Aroclor-1254	Target	170000		ug/kg	170000	D	400.0	YES	S4VEM
Aroclor-1260	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM
Aroclor-1262	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM
Aroclor-1268	Target	45	U	ug/kg	45	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name: SHILO CHURCH ROAD SITE  
Project**

**GroupID: 47768/EPW14030/C0AB7**

**Lab Name: Chemtech Consulting Group**

Sample Number: C0AC9	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/26/2018	Sample Time: 08:40:00
% Moisture:		% Solids: 73.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	91	U	ug/kg	91	U	1.0	YES	S4VEM
Benzaldehyde	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Phenol	Target	270	J	ug/kg	270	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
2-Chlorophenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2-Methylphenol	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Acetophenone	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
4-Methylphenol	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Hexachloroethane	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Nitrobenzene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Isophorone	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2-Nitrophenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Naphthalene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
4-Chloroaniline	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Caprolactam	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2-Nitroaniline	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Dimethylphthalate	Target	130	J	ug/kg	130	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Acenaphthylene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
3-Nitroaniline	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Acenaphthene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
4-Nitrophenol	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Dibenzofuran	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Diethylphthalate	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Fluorene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
4-Nitroaniline	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Atrazine	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Pentachlorophenol	Target	130	J	ug/kg	130	J	1.0	YES	S4VEM
Phenanthrene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Anthracene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Carbazole	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	190	J	ug/kg	190	J	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Fluoranthene	Target	450	UJ	ug/kg	450	U	1.0	YES	S4VEM
Pyrene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	740	J	ug/kg	740		1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Chrysene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	2300	J	ug/kg	2300		1.0	YES	S4VEM
Di-n-octyl phthalate	Target	450	U	ug/kg	450	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	230	U	ug/kg	230	U	1.0	YES	S4VEM
1,1-Biphenyl, 3,3,5,5-tetrachloro	TIC	120	J	ug/kg	120	J	1.0	YES	NV
Total Alkanes	TIC			ug/kg			1.0	YES	NV
2,3,3,6-Tetrachloro-1,1-biphenyl	TIC	150	J	ug/kg	150	J	1.0	YES	NV
2,3,3,5,5-Pentachloro-1,1-biphe	TIC	160	J	ug/kg	160	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,3,5,6-hexa	TIC	160	J	ug/kg	160	J	1.0	YES	NV
n-Hexadecanoic acid	TIC	290	J	ug/kg	290	J	1.0	YES	NV
1,1-Biphenyl, 3,3,5-trichloro-	TIC	310	J	ug/kg	310	J	1.0	YES	NV
2,3,3,4,5,5-Hexachloro-1,1-bip	TIC	210	J	ug/kg	210	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,6-tetrachloro	TIC	440	J	ug/kg	440	J	1.0	YES	NV
2,2,3,3,5,6-Hexachloro-1,1-biph	TIC	310	J	ug/kg	310	J	1.0	YES	NV
1,1-Dichloro-2,2-bis(p-chloropheny	TIC	370	J	ug/kg	370	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,6-tetrachlor	TIC	570	J	ug/kg	570	J	1.0	YES	NV
2,2,3,6,6-Pentachloro-1,1-biphe	TIC	640	J	ug/kg	640	J	1.0	YES	NV
1,1-Biphenyl, 2,3,5,5-tetrachloro	TIC	660	J	ug/kg	660	J	1.0	YES	NV
2,3,3,5,6-Pentachloro-1,1-biphen	TIC	590	J	ug/kg	590	J	1.0	YES	NV
2,3,3,5,5,6-Hexachloro-1,1-biph	TIC	620	J	ug/kg	620	J	1.0	YES	NV
1,1-Biphenyl, 2,2,4,4,6-Pentach	TIC	650	J	ug/kg	650	J	1.0	YES	NV
(2,3,4,5-Tetrachloro-2,4-cyclopent	TIC	690	J	ug/kg	690	J	1.0	YES	NV
2,3,3,4,5,5-Hexachloro-1,1-biph	TIC	1100	J	ug/kg	1100	J	1.0	YES	NV
unknown-02	TIC	1500	J	ug/kg	1500	J	1.0	YES	NV
2,2,3,4,5,6-Hexachloro-1,1-biphe	TIC	1800	J	ug/kg	1800	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,4,5,5-hexa	TIC	1900	J	ug/kg	1900	J	1.0	YES	NV
p,p-DDT	TIC	2000	J	ug/kg	2000	J	1.0	YES	NV
2,2,4,5-Tetrachloro-1,1-biphenyl	TIC	3000	J	ug/kg	3000	J	1.0	YES	NV
1,1-Biphenyl, 2,2,4,5,5-pentach	TIC	2000	J	ug/kg	2000	J	1.0	YES	NV
2,2,3,5,6,6-Hexachloro-1,1-biph	TIC	2600	J	ug/kg	2600	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,4,5-pentach	TIC	3700	J	ug/kg	3700	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,3,6-pentach	TIC	6700	J	ug/kg	6700	J	1.0	YES	NV
2,3,3,4,5-Pentachloro-1,1-biphen	TIC	5000	J	ug/kg	5000	J	1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,6-pentach	TIC	5400	J	ug/kg	5400	J	1.0	YES	NV
unknown-01	TIC	130	J	ug/kg	130	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AD0	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/26/2018	Sample Time: 09:05:00
% Moisture:		% Solids: 79.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1221	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1232	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1242	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1248	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1254	Target	1100	J	ug/kg	1100	DP	10.0	YES	S4VEM
Aroclor-1260	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1262	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM
Aroclor-1268	Target	42	U	ug/kg	42	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name: SHILO CHURCH ROAD SITE  
Project**

**GroupID: 47768/EPW14030/C0AB7**

**Lab Name: Chemtech Consulting Group**

Sample Number: C0AD0	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/26/2018	Sample Time: 09:05:00
% Moisture:		% Solids: 79.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	84	U	ug/kg	84	U	1.0	YES	S4VEM
Benzaldehyde	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Phenol	Target	230	J	ug/kg	230	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
2-Chlorophenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2-Methylphenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Acetophenone	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4-Methylphenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Hexachloroethane	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Nitrobenzene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Isophorone	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2-Nitrophenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Naphthalene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
4-Chloroaniline	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Caprolactam	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2-Nitroaniline	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Dimethylphthalate	Target	140	J	ug/kg	140	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Acenaphthylene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
3-Nitroaniline	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Acenaphthene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4-Nitrophenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Dibenzofuran	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Diethylphthalate	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Fluorene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
4-Nitroaniline	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Atrazine	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Pentachlorophenol	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Phenanthrene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Anthracene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Fluoranthene	Target	420	UJ	ug/kg	420	U	1.0	YES	S4VEM
Pyrene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	210	UJ	ug/kg	210	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Chrysene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	210	UJ	ug/kg	210	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	420	U	ug/kg	420	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	88	J	ug/kg	88	J	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	210	U	ug/kg	210	U	1.0	YES	S4VEM
unknown-01	TIC	4700	J	ug/kg	4700	J	1.0	YES	NV
Supraene	TIC	270	J	ug/kg	270	J	1.0	YES	NV
n-Hexadecanoic acid	TIC	250	J	ug/kg	250	J	1.0	YES	NV
Octadecanoic acid	TIC	110	J	ug/kg	110	J	1.0	YES	NV
Total Alkanes	TIC	200		ug/kg	200		1.0	YES	NV
1,3,5,7-Cyclooctatetraene	TIC	84	J	ug/kg	84	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AD1	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/26/2018	Sample Time: 09:26:00
% Moisture:		% Solids: 76.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	43	U	ug/kg	43	U	1.0	YES	S4VEM
Aroclor-1221	Target	43	U	ug/kg	43	U	1.0	YES	S4VEM
Aroclor-1232	Target	43	U	ug/kg	43	U	1.0	YES	S4VEM
Aroclor-1242	Target	43	U	ug/kg	43	U	1.0	YES	S4VEM
Aroclor-1248	Target	43	U	ug/kg	43	U	1.0	YES	S4VEM
Aroclor-1254	Target	4700		ug/kg	4700	D	20.0	YES	S4VEM
Aroclor-1260	Target	3800		ug/kg	3800	D	20.0	YES	S4VEM
Aroclor-1262	Target	43	U	ug/kg	43	U	1.0	YES	S4VEM
Aroclor-1268	Target	43	U	ug/kg	43	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
Project

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Sample Number: C0AD1	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/26/2018	Sample Time: 09:26:00
% Moisture:		% Solids: 76.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	88	U	ug/kg	88	U	1.0	YES	S4VEM
Benzaldehyde	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Phenol	Target	150	J	ug/kg	150	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
2-Chlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Methylphenol	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Acetophenone	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
4-Methylphenol	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Hexachloroethane	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Nitrobenzene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Isophorone	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Nitrophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Naphthalene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Chloroaniline	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Caprolactam	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2-Nitroaniline	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Dimethylphthalate	Target	69	J	ug/kg	69	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Acenaphthylene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
3-Nitroaniline	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Acenaphthene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
4-Nitrophenol	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Dibenzofuran	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Diethylphthalate	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Fluorene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Nitroaniline	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Atrazine	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Pentachlorophenol	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Phenanthrene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Anthracene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Carbazole	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Fluoranthene	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Pyrene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Chrysene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	430	U	ug/kg	430	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	220	U	ug/kg	220	U	1.0	YES	S4VEM
Total Alkanes	TIC	400		ug/kg	400		1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,6-pentach	TIC	88	J	ug/kg	88	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AD2	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 16:40:00
% Moisture:		% Solids: 59.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM
Aroclor-1221	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM
Aroclor-1232	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM
Aroclor-1242	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM
Aroclor-1248	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM
Aroclor-1254	Target	210000		ug/kg	210000	D	400.0	YES	S4VEM
Aroclor-1260	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM
Aroclor-1262	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM
Aroclor-1268	Target	56	U	ug/kg	56	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Sample Number: C0AD2	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: SCR	pH:	Sample Date: 07/25/2018	Sample Time: 16:40:00
% Moisture:		% Solids: 59.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	110	R	ug/kg	110	U	1.0	YES	S4VEM
Benzaldehyde	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Phenol	Target	330	J	ug/kg	330	J	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
2-Chlorophenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2-Methylphenol	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Acetophenone	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
4-Methylphenol	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Hexachloroethane	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Nitrobenzene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Isophorone	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2-Nitrophenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Naphthalene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
4-Chloroaniline	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Caprolactam	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2-Nitroaniline	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Dimethylphthalate	Target	220	J	ug/kg	220	J	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Acenaphthylene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
3-Nitroaniline	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Acenaphthene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
4-Nitrophenol	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Dibenzofuran	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Diethylphthalate	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Fluorene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
4-Nitroaniline	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Atrazine	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Pentachlorophenol	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Phenanthrene	Target	140	J	ug/kg	140	J	1.0	YES	S4VEM
Anthracene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Carbazole	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	270	J	ug/kg	270	J	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Fluoranthene	Target	170	J	ug/kg	170	J	1.0	YES	S4VEM
Pyrene	Target	180	J	ug/kg	180	J	1.0	YES	S4VEM
Butylbenzylphthalate	Target	75	J	ug/kg	75	J	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	110	J	ug/kg	110	J	1.0	YES	S4VEM
Chrysene	Target	110	J	ug/kg	110	J	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	1500	J	ug/kg	1500		1.0	YES	S4VEM
Di-n-octyl phthalate	Target	550	U	ug/kg	550	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	130	J	ug/kg	130	J	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Dibeno(a,h)anthracene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	290	U	ug/kg	290	U	1.0	YES	S4VEM
2,3,3,6-Tetrachloro-1,1-biphenyl	TIC	310	J	ug/kg	310	J	1.0	YES	NV
2,3,3,4-Tetrachloro-1,1-biphenyl	TIC	320	J	ug/kg	320	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,5,5-Pentach	TIC	280	J	ug/kg	280	J	1.0	YES	NV
2,2,3,5,6,6-Hexachloro-1,1-biph	TIC	290	J	ug/kg	290	J	1.0	YES	NV
Cinnamoylglycine, methyl ester	TIC	290	J	ug/kg	290	J	1.0	YES	NV
2,3,4,5-Tetrachloro-1,1-biphenyl	TIC	390	J	ug/kg	390	J	1.0	YES	NV
Dehydroabietic acid	TIC	390	J	ug/kg	390	J	1.0	YES	NV
2,2,3,3,5,6-Hexachloro-1,1-biph	TIC	430	J	ug/kg	430	J	1.0	YES	NV
1,1-Biphenyl, 2,2,4,4-tetrachlo	TIC	430	J	ug/kg	430	J	1.0	YES	NV
n-Hexadecanoic acid	TIC	520	J	ug/kg	520	J	1.0	YES	NV
1,1-Biphenyl, 2,2,5,6-Tetrachlo	TIC	630	J	ug/kg	630	J	1.0	YES	NV
1,1-Biphenyl, 3,4,5-trichloro-	TIC	680	J	ug/kg	680	J	1.0	YES	NV
1,1-Biphenyl, 3,3,4,5-tetrachlo	TIC	740	J	ug/kg	740	J	1.0	YES	NV
2,2,3,4,5,6-Hexachloro-1,1-biphe	TIC	780	J	ug/kg	780	J	1.0	YES	NV
2,3,4,4,5,6-Hexachloro-1,1-biphe	TIC	790	J	ug/kg	790	J	1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,6-pentach	TIC	840	J	ug/kg	840	J	1.0	YES	NV
1,1-Biphenyl, 2,2,4,6,6-Pentach	TIC	1600	J	ug/kg	1600	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,3,5,5-Hexa	TIC	1400	J	ug/kg	1400	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,4,5-pentach	TIC	1400	J	ug/kg	1400	J	1.0	YES	NV
1,1-Biphenyl, 2,2,4,5,5-pentach	TIC	1800	J	ug/kg	1800	J	1.0	YES	NV
Total Alkanes	TIC			ug/kg			1.0	YES	NV
1,1-Biphenyl, 2,4,5-trichloro-	TIC	110	J	ug/kg	110	J	1.0	YES	NV
1,1-Biphenyl, 2,3,4,6-Tetrachlor	TIC	120	J	ug/kg	120	J	1.0	YES	NV
unknown-01	TIC	150	J	ug/kg	150	J	1.0	YES	NV
1,1-Biphenyl, 2,4,4-trichloro-	TIC	140	J	ug/kg	140	J	1.0	YES	NV
3,3,4-Trichloro-1,1-biphenyl	TIC	150	J	ug/kg	150	J	1.0	YES	NV
1,1-Biphenyl, 2,2,3,6-tetrachlo	TIC	160	J	ug/kg	160	J	1.0	YES	NV
unknown-02	TIC	150	J	ug/kg	150	J	1.0	YES	NV
2,2,3,4,6-Pentachloro-1,1-biphe	TIC	200	J	ug/kg	200	J	1.0	YES	NV
1,1-Biphenyl, 2,3,3,4,4,5-hexa	TIC	250	J	ug/kg	250	J	1.0	YES	NV
Decane, 1-iodo-	TIC	280	J	ug/kg	280	J	1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AD2MS	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 07/25/2018	Sample Time: 16:40:00
% Moisture:		% Solids: 59.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	9600	J	ug/kg	9600	E	1.0	YES	S4VEM
Aroclor-1221	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1232	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1242	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1248	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1254	Target	12000	J	ug/kg	12000	EP	1.0	YES	S4VEM
Aroclor-1260	Spike	7000	J	ug/kg	7000	EP	1.0	YES	S4VEM
Aroclor-1262	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1268	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: C0AD2MSD	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 07/25/2018	Sample Time: 16:40:00
% Moisture:		% Solids: 59.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	9200	J	ug/kg	9200	E	1.0	YES	S4VEM
Aroclor-1221	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1232	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1242	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1248	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1254	Target	12000	J	ug/kg	12000	EP	1.0	YES	S4VEM
Aroclor-1260	Spike	6900	J	ug/kg	6900	EP	1.0	YES	S4VEM
Aroclor-1262	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM
Aroclor-1268	Target	55	U	ug/kg	55	U	1.0	YES	S4VEM

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Sample Number: SBLK60	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids: 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	67	U	ug/kg	67	U	1.0	YES	S4VEM
Benzaldehyde	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Phenol	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Bis(2-Chloroethyl)ether	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
2-Chlorophenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2-Methylphenol	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
2,2-oxybis(1-Chloropropane)	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Acetophenone	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
4-Methylphenol	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
N-Nitroso-di-n-propylamine	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Hexachloroethane	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Nitrobenzene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Isophorone	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2-Nitrophenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2,4-Dimethylphenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Bis(2-Chloroethoxy)methane	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2,4-Dichlorophenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Naphthalene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
4-Chloroaniline	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Hexachlorobutadiene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Caprolactam	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
4-Chloro-3-methylphenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2-Methylnaphthalene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Hexachlorocyclopentadiene	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
2,4,6-Trichlorophenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2,4,5-Trichlorophenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
1,1-Biphenyl	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2-Chloronaphthalene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2-Nitroaniline	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Dimethylphthalate	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2,6-Dinitrotoluene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Acenaphthylene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
3-Nitroaniline	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Acenaphthene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2,4-Dinitrophenol	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
4-Nitrophenol	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Dibenzofuran	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2,4-Dinitrotoluene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Diethylphthalate	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Fluorene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
4-Chlorophenyl-phenylether	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
4-Nitroaniline	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
4,6-Dinitro-2-methylphenol	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
N-Nitrosodiphenylamine	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
1,2,4,5-Tetrachlorobenzene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
4-Bromophenyl-phenylether	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Hexachlorobenzene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Atrazine	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Pentachlorophenol	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Phenanthrene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Anthracene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM

# Sample Summary Report

**Project Name:** SHILO CHURCH ROAD SITE  
**Project**

**GroupID:** 47768/EPW14030/C0AB7

**Lab Name:** Chemtech Consulting Group

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Carbazole	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Di-n-butylphthalate	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Fluoranthene	Target	330	UJ	ug/kg	330	U	1.0	YES	S4VEM
Pyrene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Butylbenzylphthalate	Target	170	UJ	ug/kg	170	U	1.0	YES	S4VEM
3,3-Dichlorobenzidine	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Benzo(a)anthracene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Chrysene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Bis(2-ethylhexyl)phthalate	Target	170	UJ	ug/kg	170	U	1.0	YES	S4VEM
Di-n-octyl phthalate	Target	330	U	ug/kg	330	U	1.0	YES	S4VEM
Benzo(b)fluoranthene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Benzo(k)fluoranthene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Benzo(a)pyrene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Indeno(1,2,3-cd)pyrene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Dibenzo(a,h)anthracene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Benzo(g,h,i)perylene	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
2,3,4,6-Tetrachlorophenol	Target	170	U	ug/kg	170	U	1.0	YES	S4VEM
Total Alkanes	TIC			ug/kg			1.0	YES	NV

# Sample Summary Report

Project Name: SHILO CHURCH ROAD SITE  
Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

## USEPA CLP COC (REGION COPY)

DateShipped: 25-Jul-18

CarrierName: FedEx

AirbillNo: 7722 1310 1385

## CHAIN OF CUSTODY RECORD

Shiloh Church Road/VA

Case #: 47768

Cooler #: 02

No: 3-07-25-18-110521-0014

Lab: Chemtech Consulting Group

Lab Contact: [REDACTED] Non-responsive based on file

Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
SCR-0718-SW01-00	C0AB6	Water/ START [REDACTED] Non-resp	Grab	ICP-PCBs(21)	1146 (None), 1147 (None) (2)	SCR	07-23-2018 10:40	Field Sample
SCR-0718-SS03-0000-00	C0AB7	Soil/ START [REDACTED] Non-resp	Grab	ICP-PCBs(21)	1161 (None) (1)	SCR	07-25-2018 09:19	Field Sample
SCR-0718-SS01-0606-00	C0AB8	Sediment/ START [REDACTED] Non-resp	Grab	ICP-PCBs(21)	1168 (None) (1)	SCR	07-24-2018 16:30	Field Sample
SCR-0718-SS02-0000-00	C0AB9	Soil/ START [REDACTED] Non-resp	Grab	ICP-PCBs(21)	1175 (None) (1)	SCR	07-25-2018 09:05	Field Sample
SCR-0718-SW02-00	C0AC0	Water/ START [REDACTED] Non-resp	Grab	ICP-PCBs(21)	1177 (None), 1178 (None) (2)	SCR	07-23-2018 11:20	Field Sample
SCR-0718-SW03-00	C0AC1	Water/ START [REDACTED] Non-resp	Grab	ICP-PCBs(21)	1186 (None), 1187 (None) (2)	SCR	07-24-2018 16:30	Field Sample

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #
Analysis Key: ICP-PCBs=CLP ICP-MPCBs by SOM02.4	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**USEPA CLP COC (REGION COPY)**

DateShipped: 25-Jul-18

CarrierName: FedEx

AirbillNo: 7722 1310 1216

**CHAIN OF CUSTODY RECORD**

Shiloh Church Road/VA

Case #: 47768

Cooler #: 03

**No: 3-07-25-18-111008-0015**

Lab: Chemtech Consulting Group

Lab Contact: [REDACTED] Non-responsive based on

Lab Phone: 908-789-8900

<b>Sample Identifier</b>	<b>CLP Sample No.</b>	<b>Matrix/Sampler</b>	<b>Coll. Method</b>	<b>Analysis/Turnaround (Days)</b>	<b>Tag/Preservative/Bottles</b>	<b>Location</b>	<b>Collection Date/Time</b>	<b>Sample Type</b>
SCR-0718-SW01-00	C0AB6	Water/ START [REDACTED] Non-resp	Grab	TAL SVOA(21)	1150 (None), 1151 (None) (2)	SCR	07-23-2018 10:40	Field Sample
SCR-0718-SS03-0000-00	C0AB7	Soil/ START [REDACTED] Non-resp	Grab	TAL SVOA(21)	1160 (None) (1)	SCR	07-25-2018 09:19	Field Sample
SCR-0718-SS01-0606-00	C0AB8	Sediment/ START [REDACTED] Non-resp	Grab	TAL SVOA(21)	1167 (None) (1)	SCR	07-24-2018 16:30	Field Sample
SCR-0718-SS02-0000-00	C0AB9	Soil/ START [REDACTED] Non-resp	Grab	TAL SVOA(21)	1174 (None) (1)	SCR	07-25-2018 09:05	Field Sample
SCR-0718-SW02-00	C0AC0	Water/ START [REDACTED] Non-resp	Grab	TAL SVOA(21)	1180 (None), 1181 (None) (2)	SCR	07-23-2018 11:20	Field Sample
SCR-0718-SW03-00	C0AC1	Water/ START [REDACTED] Non-resp	Grab	TAL SVOA(21)	1189 (None), 1190 (None) (2)	SCR	07-24-2018 16:30	Field Sample

Special Instructions:	<b>Shipment for Case Complete? N</b>
	<b>Samples Transferred From Chain of Custody #</b>
Analysis Key: TAL SVOA=TAL SVOCs by SOM02.4	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

## USEPA CLP COC (REGION COPY)

DateShipped: 26-Jul-18

CarrierName: FedEx

AirbillNo: 7728 2439 7914

## CHAIN OF CUSTODY RECORD

Shiloh Church Road/VA

Case #: 47768

Cooler #: 06

No: 3-07-26-18-112316-0018

Lab: Chemtech Consulting Group

Lab Contact: [REDACTED] Non-responsive based on

Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
SCR-0718-SS04-0000-00	C0AC7	Soil/ START Non-resp	Grab	TAL SVOA(21), ICP-PCBs(21)	1237 (None), 1238 (None) (2)	SCR	07-25-2018 16:35	Field Sample
SCR-0718-SS05-0000-00	C0AC8	Soil/ START Non-resp	Grab	TAL SVOA(21), ICP-PCBs(21)	1244 (None), 1245 (None), 1274 (None) (3)	SCR	07-25-2018 16:55	Field Sample
SCR-0718-SS06-0000-00	C0AC9	Soil/ START Non-resp	Grab	TAL SVOA(21), ICP-PCBs(21)	1251 (None), 1252 (None) (2)	SCR	07-26-2018 08:40	Field Sample
SCR-0718-SS07-0000-00	C0AD0	Soil/ START Non-resp	Grab	TAL SVOA(21), ICP-PCBs(21)	1258 (None), 1259 (None) (2)	SCR	07-26-2018 09:05	Field Sample
SCR-0718-SS08-0000-00	C0AD1	Soil/ START Non-resp	Grab	TAL SVOA(21), ICP-PCBs(21)	1265 (None), 1266 (None) (2)	SCR	07-26-2018 09:26	Field Sample
SCR-0718-SS04-0000-01	C0AD2	Soil/ START Non-resp	Grab	TAL SVOA(21), ICP-PCBs(21)	1272 (None), 1273 (None) (2)	SCR	07-25-2018 16:40	Field Duplicate of [M]C0AC7

Sample(s) to be used for Lab QC: SCR-0718-SS04-0000-01 Tag 1273	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #

Analysis Key: TAL SVOA=TAL SVOCs by SOM02.4, ICP-PCBs=CLP ICP-MPCBs by SOM02.4

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

# Data Validation Report

## Data Review Results

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12:46:00

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### HoldingTimes\_Preservation

---

NONE FOUND

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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**TUNE**

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**NONE FOUND**

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### Initial Calibration

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#### Method - Semivolatiles

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**Test Name:** EXES-793

**Defect Message:** The following samples are associated with an initial calibration percent relative standard deviation (%RSD) outside criteria. Detects are qualified as estimated J. Use professional judgment to qualify nondetects.

**Associated Samples:** C0AB8, C0AB9, C0AD1

Defective Analyte	Defective Samples/Analyses
Fluoranthene	SSTD00501

No positive results for this analyte in associated samples. No data were qualified.

MM 9/7/18

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

---

### InitialCalibrationVerification

---

**NONE FOUND**

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

### Continuing Calibration Verification

#### Method - Semivolatiles

Test Name: EXES-1208

Defect Message: The following samples are associated with an opening or closing CCV with % Difference exceeding criteria. Detecteds are qualified as estimated J.

Nondetects are qualified as estimated UJ.

Associated Samples: C0AB7, C0AB9, C0AC7, C0AC8, C0AC9, C0AD0, C0AD2, SBLK60

Defective Analyte	Defective Samples/Analyses
Fluoranthene	SSTD02057
Butylbenzylphthalate	SSTD02057
Bis(2-ethylhexyl)phthalate	SSTD02057

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### Blanks

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**NONE FOUND**

# Data Validation Report

## Data Review Results

Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

### **DMC\_Surrogate**

#### **Method - Aroclors**

**Test Name: EXES-1350**

**Defect Message:** The following samples have DMC/surrogate percent recoveries less than the primary minimum criteria but greater than or equal to the expanded minimum criteria. Detects are qualified as estimated J-. Nondetects are qualified as estimated UJ.

**Associated Samples: C0AB9**

Defective Analyte	Defective Samples/Analyses
Decachlorobiphenyl	C0AB9

**Test Name: EXES-983**

**Defect Message:** The following diluted samples have surrogate percent recoveries less than the expanded minimum criteria. Detects are not qualified. Nondetects are not qualified. Use professional judgment to qualify data.

**Associated Samples: C0AC7, C0AC9, C0AD2**

Defective Analyte	Defective Samples/Analyses
Tetrachloro-m-xylene	C0AC7[Dilution-01], C0AC9[Dilution-01], C0AD2[Dilution-01]
Decachlorobiphenyl	C0AC7[Dilution-01], C0AC9[Dilution-01], C0AD2[Dilution-01]

**Surrogates were diluted out. No data were qualified.**

**MM 9/7/18**

#### **Method - Semivolatiles**

**Data Validation Report****Data Review Results**

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

**Test Name: EXES-107**

**Defect Message:** The following undiluted sample analyses have DMC/surrogate percent recoveries less than the expanded minimum criteria. Detects are qualified as estimated J-. Nondetects are qualified as unusable R.

**Associated Samples: C0AD2**

Defective Analyte	Defective Samples/Analyses
1,4-Dioxane-d8	C0AD2

**Test Name: EXES-230**

**Defect Message:** The following undiluted sample analyses have DMC/surrogate percent recoveries less than the primary minimum criteria but greater than or equal to the expanded minimum criteria. Detects are qualified as estimated J-. Nondetects are qualified as estimated UJ.

**Associated Samples: C0AB7**

Defective Analyte	Defective Samples/Analyses
4-Nitrophenol-d4	C0AB7

%R <10%. Non-detects for associated analytes qualified "R".

MM 9/7/18

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### MatrixSpikes

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#### Method - Aroclors

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Test Name: EXES-975

Defect Message: The following matrix/matrix spike duplicate samples have percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J. Nondetects are not qualified.

Associated Samples: C0AD2

Defective Analyte	Defective Samples/Analyses
Aroclor-1016	C0AD2MS, C0AD2MSD
Aroclor-1260	C0AD2MS, C0AD2MSD

---

No positive results in parent sample. No data were qualified.

MM 9/7/18

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### LaboratoryControlSample

---

**NONE FOUND**

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### Cleanup

---

**NONE FOUND**

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### InternalStandard

---

**NONE FOUND**

# Data Validation Report

## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

### Target Analyte Quantitation

#### Method - Aroclors

##### Test Name: EXES-1509

Defect Message: The following samples have result difference between the two columns greater than 25%. Detects are not qualified. Use professional judgment to qualify data.

##### Associated Samples: C0AB8, C0AD0, C0AD2MS, C0AD2MSD

Defective Analyte	Defective Samples/Analyses
Aroclor-1254	C0AB8, C0AD0[Dilution-01], C0AD2MS, C0AD2MSD
Aroclor-1260	C0AD2MS, C0AD2MSD

##### Test Name: EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

##### Associated Samples: C0AB8

Defective Analyte	Defective Samples/Analyses
Aroclor-1254	C0AB8

#### Method - Semivolatiles

##### Test Name: EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

##### Associated Samples: C0AB7, C0AB9, C0AC7, C0AC8, C0AC9, C0AD0, C0AD1, C0AD2

# Data Validation Report

## Data Review Results

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Fri, 17  
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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

Defective Analyte	Defective Samples/Analyses
Phenol	C0AB7, C0AB9, C0AC7, C0AC8, C0AC9, C0AD0, C0AD1, C0AD2
2-Methylphenol	C0AB7
4-Methylphenol	C0AB7, C0AB9
2,4-Dimethylphenol	C0AB9
Naphthalene	C0AB9
Hexachlorobutadiene	C0AB9
Dimethylphthalate	C0AB7, C0AB9, C0AC7, C0AC8, C0AC9, C0AD0, C0AD1, C0AD2
Pentachlorophenol	C0AC9
Phenanthrene	C0AD2
Di-n-butylphthalate	C0AC9, C0AD2
Fluoranthene	C0AB7, C0AC7, C0AD2
Pyrene	C0AC7, C0AC8, C0AD2
Butylbenzylphthalate	C0AD2
Benzo(a)anthracene	C0AB7, C0AC7, C0AD2
Chrysene	C0AC7, C0AD2
Bis(2-ethylhexyl)phthalate	C0AB7, C0AC8
Benzo(b)fluoranthene	C0AC7, C0AC8, C0AD0, C0AD2
Benzo(k)fluoranthene	C0AB7
Benzo(a)pyrene	C0AB7
Indeno(1,2,3-cd)pyrene	C0AB7
Benzo(g,h,i)perylene	C0AC7

# Data Validation Report

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## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### PercentSolids

---

**NONE FOUND**

# Data Validation Report

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## Data Review Results

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Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

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### SampleAnalysis

---

**NONE FOUND**

## SDG COVER PAGE

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Cas No.: 47768 MA No. : \_\_\_\_\_ SDG No.: COAB7  
 SOW No. : SOM02.4

EPA Sample No.	Lab Sample ID	Trace VOA	Low Med VOA	Analysis Method			
				SVOA	SVOA SIM	PEST	ARO
COAB7	J4178-01			X			X
COAB8	J4178-02			X			X
COAB9	J4178-03			X			X
COAC7	J4178-04			X			X
COAC8	J4178-05			X			X
COAC9	J4178-06			X			X
COAD0	J4178-07			X			X
COAD1	J4178-08			X			X
COAD2	J4178-09			X			X
COAD2MS	J4178-10						X
COAD2MSD	J4178-11						X

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Non-responsive based on revised scope Name: Non-responsive based on revised scope  
 Date: 08/16/18 Title: QA/00

**SDG NARRATIVE****LAB NAME: CHEMTECH CONSULTING GROUP****CASE: 47768****SDG: C0AB7****CONTRACT: EPW14030****LAB CODE: CHM****CHEMTECH PROJECT: J4178****MODIFICATION REF. NUMBER: N/A**

Sample ID	EPA Sample ID	Test	pH
J4178-01	C0AB7		
J4178-02	C0AB8		
J4178-03	C0AB9		
J4178-03DL	C0AB9DL	SVOC	
J4178-04	C0AC7		
J4178-04DL	C0AC7DL	PCB	
J4178-05	C0AC8		
J4178-05DL	C0AC8DL	PCB	
J4178-06	C0AC9		
J4178-06DL	C0AC9DL	PCB	
J4178-07	C0AD0		
J4178-07DL	C0AD0DL	PCB	
J4178-08	C0AD1		
J4178-08DL	C0AD1DL	PCB	
J4178-09	C0AD2		
J4178-09DL	C0AD2DL	PCB	
J4178-10MS	C0AD2MS		
J4178-11MSD	C0AD2MSD		

3 Soil samples were delivered to the laboratory intact on 07/26/2018.

8 Soil samples were delivered to the laboratory intact on 07/27/2018.

Test requested on the Chain of Custody was Semivolatile Organic and Aroclor by Method SOM02.4.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.7, 3.3 degrees Celsius for the samples received on 07/26/2018 and 2.3 degrees Celsius for the samples received on 07/27/2018.

**Shipping Discrepancies and/or QC issues:****None****Semivolatiles**

The samples were analyzed on instrument BNA\_M using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

The samples were analyzed on instrument BNA\_N using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semivolatile Organic samples for Soil were extracted by Method SOM02.4 on 08/01/18.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for C0AB7 [1,4-Dioxane-d8 - 36%, 4-Nitrophenol-d4 - 8%], C0AB9 [1,4-Dioxane-d8 - 32%], C0AB9DL [1,4-Dioxane-d8 - 33%], C0AC8 [1,4-Dioxane-d8 - 39%], C0AC9 [1,4-Dioxane-d8 - 31%], C0AD0 [1,4-Dioxane-d8 - 32%] and C0AD2 [1,4-Dioxane-d8 - 9%]. As per method four surrogates are allowed to fail. No further corrective action was taken.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The %RSD met requirement for initial Calibration for all compounds except for Fluoranthene with dated 07/13/18 with instrument N. As per method four compounds are allowed to fail, not exceed 40%. No further corrective action was taken.

The Continuous Calibration (SSTD02057) File ID BM016171.D met the requirements except for Fluoranthene, Butylbenzylphthalate and bis(2-Ehtylhexyl)phthalate. As per method four surrogates are allowed to fail. No further corrective action was taken.

The Continuous Calibration (SSTD02058) File ID BM016182.D met the requirements except for 4-Methylphenol. As per method four surrogates are allowed to fail. No further corrective action was taken.

The Tuning criteria met requirements.

Sample C0AB9 was diluted due to high concentration.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

**Concentration of SOIL Sample:**

Concentration ug/Kg,  
(dry weight basis) =  $(Ax)(Is)(Vt)(DF)(GPC)$

$$(Ais)(\overline{RRF})(Vi)(Wt)(D)$$

Where,

Ax = Area of the characteristic ion for the compound to be measured.

Ais = Area of the characteristic ion for the internal standard.

Is = Amount of internal standard injected in ng.

Vi = Volume of extract injected in microliters (uL)

Vt = Volume of concentrated extract in microliters (uL)

Wt = Weight of the original sample extracted in g

Df = Dilution factor

RRF = Mean Relative Response Factor determined from the initial calibration standard.

GPC = Vi / Vin = GPC factor (If no GPC is performed, GPC=1)

Vout = Volume of extract collected after GPC cleanup.

D = % dry weight or  $\frac{100 - \% \text{Moisture}}{100}$

Example calculation of D0AB7 for Phenol:

Ax = 28699

Ais = 39182

Is = 20

Vi = 1

Vt = 500

Wt = 30.0

Df = 1

RRF = 1.835

GPC = 2

D = 0.65

Concentration

(dry weight basis) ug/Kg =  $\frac{(28699)(20)(500)(1)(2)}{(39182)(1.835)(1)(30.0)(0.65)}$

$$= 410 \text{ ug/Kg}$$

RRF Calculation of standard 20 ppb for **Naphthalene** with N instrument for method 07/13/18

$$\begin{aligned} \text{RRF} &= \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}} \\ &= 2100102/2030733 \times 20/20 \\ &= 1.034 \text{ (Reported RRF)} \end{aligned}$$

### Aroclors:

The analyses were performed on instrument GCECD\_R. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.

Samples were analyzed on a single injection dual column system. To distinguish the second column analysis from the first column a -2 suffix was added to the file id on the form 8 and form 1. This refers to forms where both columns are reported. Form 1s for the IBLK, MS, MSD and ALCS have the -2 on the form.

Aroclor samples were extracted by Method SOM02.4 on 07/31/2018 and analyzed on 08/02, 03, 08/2018. All the samples were subjected to a Sulfuric acid cleanup. The samples were extracted and analyzed within contractual holding time.

The Surrogate recoveries met the requirements except for;  
C0AB9 DCB [29%] on the first column.

The SOW allows one surrogate to fail to meet the criteria per column. (Section 11.3.6 of Exhibit D Aroclor Analysis). No further corrective action was taken.

Samples C0AC7DL, C0AC9DL and C0AD2DL both surrogates were 0% in both columns due to the high dilution for AR1254.

C0AD2MS/MSD did not meet the requirements. No corrective action is required for failure to meet the MS/MSD criteria by the SOW. (Section 12.2.5.5 of Exhibit D Aroclor Analysis). The failure is due to the high concentration of AR1254 in the original sample.

The RPD met the requirements.

The Retention Times met requirements.

The Laboratory Control Sample met requirements.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuing Calibrations met the requirements.

Samples C0AC7, C0AC8, C0AC9, C0AD0, C0AD1 and C0AD2 were diluted due to the high concentration of AR1254.

Samples C0AB8, C0AC7, C0AC8, C0AC9, C0AD0, C0AD0DL, C0AD1, C0AD2MS/MSD and C0AD2 failed to meet the %D for the results between the two columns criteria.

Sample C0AB9 had a very high concentration of non-target compounds. The sample was analyzed diluted to show the peaks within SOW chromatogram specification. No Aroclor can be detected in the sample. Pesticides presence were confirmed by GC/MS and no further corrective action was taken for this sample. The diluted sample were included in the screening data for.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Calculation for Concentration in Soil samples:

$$\text{Concentration ug/Kg (Dry weight basis)} = \frac{(Ax) (Vt) (DF) (GPC)}{(CF) (Vi) (Ws) (D)}$$

Where,

Ax = Response (peak area or height) of the compound to be measured.

CF = Mean Calibration Factor from the initial calibration (area/ng).

Vt = Volume of the concentrated extract in uL

Vi = Volume of extract injected (uL). (If a single injection is made onto two columns, use ½ the volume in the syringe as the volume injected onto each column).

Ws = Weight of sample extracted (g).

D = % dry weight or  $\frac{100 - \% \text{Moisture}}{100}$

GPC =  $\frac{V_{in}}{V_{out}}$  = GPC factor (If no GPC is performed, GPC=1)

DF = Dilution Factor

### **Example of AR1254 calculation for Peak 1**

$$\text{Calibration factor Peak 1 100ppb ISTD} = \frac{\text{peak area}}{\text{Mass injected ng}}$$

$$= \frac{329400000}{0.100}$$

$$= 3294000000 \text{ calibration factor for Peak 1 100ppb AR1254}$$

$$\text{Average of 5 peaks} = 2690237613$$

Sample C0AC8DL

Ax = 3251800000

CF = 2690237613

Vt = 10000

Vi = 1.0

Ws = 30.1

D = 0.788

GPC = 1.0

DF = 20.0

$$\begin{aligned}\text{Concentration ug/Kg (Dry weight basis)} &= \frac{(Ax) (Vt) (DF) (GPC)}{(CF) (Vi) (Ws) (D)} \\ &= \frac{(3251800000)(10000)(1.0)(20.0)}{(2690237613)(1.0)(30.1)(0.788)}\end{aligned}$$

Peak 1 = 10905.8678

Average of 5 peaks = 11783.31

Reported results = 12,000 ug/kg

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature \_\_\_\_\_ Non-responsive based on revised scope  
Name: \_\_\_\_\_ Non-responsive based on revised scope  
Date: \_\_\_\_\_ 08 / 16 / 18 Title: Document Control Officer

### Manual Integration Report

Sequence:	BM071318	Instrument	BNA_m
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTD00529/ SSTD00529	BM015938.D	2-Nitroaniline	Non-responsive bas	7/16/2018 3:28:11 PM	Non-responsive bas	7/16/2018 3:29:05 PM	Peak Integrated by Software incorrectly
SSTD01030/ SSTD01030	BM015939.D	Phenanthrene		7/16/2018 3:28:16 PM		7/16/2018 3:29:07 PM	Peak Integrated by Software incorrectly
SSTD01030/ SSTD01030	BM015939.D	Phenanthrene-d10		7/16/2018 3:28:16 PM		7/16/2018 3:29:07 PM	Peak Integrated by Software incorrectly
SSTD04032/ SSTD04032	BM015941.D	2,2"-oxybis(1-Chloroprop ane)		7/16/2018 3:28:19 PM		7/16/2018 3:29:10 PM	Peak Integrated by Software incorrectly
SSTD08033/ SSTD08033	BM015942.D	Caprolactam		7/16/2018 3:28:21 PM		7/16/2018 3:29:12 PM	Peak Integrated by Software incorrectly
SSTD16034/ SSTD16034	BM015943.D	4-Nitroaniline		7/16/2018 3:28:23 PM		7/16/2018 3:29:15 PM	Peak Integrated by Software incorrectly
SSTD16034/ SSTD16034	BM015943.D	Caprolactam		7/16/2018 3:28:23 PM		7/16/2018 3:29:15 PM	Peak Integrated by Software incorrectly
SSTDICV020/ SICV35	BM015944.D	Benzo(b)fluoranthene		8/14/2018 3:44:28 PM		8/14/2018 3:44:59 PM	Peak Integrated by Software incorrectly

### Manual Integration Report

Sequence:	BM080318	Instrument	BNA_m
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020/ SSTD02057	BM016171.D	Benzo(b)fluoranthene	Non-responsive by software	8/6/2018 12:46:41 PM	Non-responsive by software	8/6/2018 12:49:43 PM	Peak Integrated by Software incorrectly
J4178-01/ C0AB7	BM016173.D	2-Methylphenol		8/6/2018 1:26:56 PM		8/6/2018 1:27:27 PM	Peak Integrated by Software incorrectly
J4178-01/ C0AB7	BM016173.D	4-Nitrophenol-d4		8/6/2018 1:26:56 PM		8/6/2018 1:27:27 PM	Peak Integrated by Software incorrectly
J4178-01/ C0AB7	BM016173.D	Benzo(a)pyrene		8/6/2018 1:26:56 PM		8/6/2018 1:27:27 PM	Peak Integrated by Software incorrectly
J4178-01/ C0AB7	BM016173.D	Benzo(k)fluoranthene		8/6/2018 1:26:56 PM		8/6/2018 1:27:27 PM	Peak Integrated by Software incorrectly
J4178-01/ C0AB7	BM016173.D	Fluoranthene		8/6/2018 1:26:56 PM		8/6/2018 1:27:27 PM	Peak Integrated by Software incorrectly
J4178-01/ C0AB7	BM016173.D	Phenanthrene-d10		8/6/2018 1:26:56 PM		8/6/2018 1:27:27 PM	Peak Integrated by Software incorrectly
J4178-06/ C0AC9	BM016175.D	4-Nitrophenol-d4		8/6/2018 12:46:45 PM		8/6/2018 12:49:46 PM	Peak Integrated by Software incorrectly
J4178-04/ C0AC7	BM016176.D	4-Nitrophenol-d4		8/6/2018 1:26:57 PM		8/6/2018 1:27:29 PM	Peak Integrated by Software incorrectly
J4178-04/ C0AC7	BM016176.D	Benzo(k)fluoranthene		8/6/2018 1:26:57 PM		8/6/2018 1:27:29 PM	Peak Integrated by Software incorrectly
J4178-04/ C0AC7	BM016176.D	Chrysene		8/6/2018 1:26:57 PM		8/6/2018 1:27:29 PM	Peak Integrated by Software incorrectly
J4178-04/ C0AC7	BM016176.D	Di-n-butylphthalate		8/6/2018 1:26:57 PM		8/6/2018 1:27:29 PM	Peak Integrated by Software incorrectly
J4178-04/ C0AC7	BM016176.D	Phenanthrene		8/6/2018 1:26:57 PM		8/6/2018 1:27:29 PM	Peak Integrated by Software incorrectly

## Manual Integration Report

Sequence:	BM080318	Instrument	BNA_m
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4178-04/C0AC7	BM016176.D	Phenanthrene-d10	Non-responsive base	8/6/2018 1:26:57 PM	Non-responsive	8/6/2018 1:27:29 PM	Peak Integrated by Software incorrectly
J4178-05/C0AC8	BM016177.D	4-Nitrophenol-d4		8/6/2018 12:46:47 PM		8/6/2018 12:49:48 PM	Peak Integrated by Software incorrectly
J4178-05/C0AC8	BM016177.D	Di-n-butylphthalate		8/6/2018 12:46:47 PM		8/6/2018 12:49:48 PM	Peak Integrated by Software incorrectly
J4178-05/C0AC8	BM016177.D	Phenanthrene-d10		8/6/2018 12:46:47 PM		8/6/2018 12:49:48 PM	Peak Integrated by Software incorrectly
J4178-07/C0AD0	BM016178.D	1,4-Dioxane-d8		8/6/2018 12:46:48 PM		8/6/2018 12:49:49 PM	Peak Integrated by Software incorrectly
J4178-07/C0AD0	BM016178.D	2,4-Dichlorophenol-d3		8/6/2018 12:46:48 PM		8/6/2018 12:49:49 PM	Peak Integrated by Software incorrectly
J4178-07/C0AD0	BM016178.D	4-Nitrophenol-d4		8/6/2018 12:46:48 PM		8/6/2018 12:49:49 PM	Peak Integrated by Software incorrectly
J4178-09/C0AD2	BM016179.D	4-Nitrophenol-d4		8/6/2018 12:46:49 PM		8/6/2018 12:49:50 PM	Peak Integrated by Software incorrectly
J4178-09/C0AD2	BM016179.D	Benzo(b)fluoranthene		8/6/2018 12:46:49 PM		8/6/2018 12:49:50 PM	Peak Integrated by Software incorrectly
SSTDCCC020/SSTD02058	BM016182.D	2,2"-oxybis(1-Chloropropene)		8/6/2018 12:46:51 PM		8/6/2018 12:49:52 PM	Peak Integrated by Software incorrectly
SSTDCCC020/SSTD02058	BM016182.D	Anthracene-d10		8/6/2018 12:46:51 PM		8/6/2018 12:49:52 PM	Peak Integrated by Software incorrectly
SSTDCCC020/SSTD02058	BM016182.D	Caprolactam		8/6/2018 12:46:51 PM		8/6/2018 12:49:52 PM	Peak Integrated by Software incorrectly
SSTDCCC020E C/ SSTD02059	BM016191.D	Benzo(b)fluoranthene		8/6/2018 12:46:59 PM		8/6/2018 12:50:01 PM	Peak Integrated by Software incorrectly

### Manual Integration Report

Sequence:	BM080318	Instrument	BNA_m
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020E C/ SSTD02059	BM016191.D	Phenanthrene	Non-responsive base	8/6/2018 12:46:59 PM	Non-responsive ba	8/6/2018 12:50:01 PM	Peak Integrated by Software incorrectly
SSTDCCC020E C/ SSTD02059	BM016191.D	Phenanthrene-d10		8/6/2018 12:46:59 PM		8/6/2018 12:50:01 PM	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	BN071318	Instrument	BNA_n
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTD04004/ SSTD04004	BN002031.D	Caprolactam	Non-responsive base peak	7/16/2018 3:30:24 PM	Non-responsive base peak	7/16/2018 3:31:10 PM	Peak Integrated by Software incorrectly
SSTD08005/ SSTD08005	BN002032.D	Caprolactam		7/16/2018 3:30:26 PM		7/16/2018 3:31:13 PM	Peak Integrated by Software incorrectly
SSTD16006/ SSTD16006	BN002033.D	Caprolactam		7/16/2018 3:30:28 PM		7/16/2018 3:31:15 PM	Peak Integrated by Software incorrectly
SSTD16006/ SSTD16006	BN002033.D	Di-n-octyl phthalate		7/16/2018 3:30:28 PM		7/16/2018 3:31:15 PM	Peak Integrated by Software incorrectly
SSTDCCC020/ SSTD02008	BN002035.D	Caprolactam		7/16/2018 3:30:31 PM		7/16/2018 3:31:18 PM	Peak Integrated by Software incorrectly
SSTDCCC020E C/ SSTD02009	BN002046.D	Caprolactam		7/16/2018 3:30:38 PM		7/16/2018 3:31:28 PM	Peak Integrated by Software incorrectly

## Manual Integration Report

Sequence:	BN080318	Instrument	BNA_n
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
SSTDCCC020E C/ SSTD02024	BN002233.D	Caprolactam	Non-response	8/6/2018 12:47:30 PM	Non-respon	8/6/2018 12:49:23 PM	Peak Integrated by Software incorrectly

### Manual Integration Report

Sequence:	BN080818	Instrument	BNA_n
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4178-03/ C0AB9	BN002244.D	Chrysene-d12	Non-responsive based on visual inspection	8/9/2018 5:09:25 PM	Non-responsive	8/9/2018 5:09:55 PM	Peak Integrated by Software incorrectly
J4178-03/ C0AB9	BN002244.D	Di-n-octyl phthalate		8/9/2018 5:09:25 PM		8/9/2018 5:09:55 PM	Peak Integrated by Software incorrectly
SSTDCCC020E C/ SSTD0208	BN002256.D	Caprolactam		8/9/2018 4:39:32 PM		8/9/2018 4:40:35 PM	Peak Integrated by Software incorrectly

### Manual Integration Report

Sequence:	PR080218	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1660ICC100/ AR1660101	PR031030.D	AR-1016-3 #2	Non-responsive based on review	8/2/2018 8:11:03 AM	Non-responsive based on review	8/2/2018 9:41:55	Peak Integrated by Software incorrectly
AR1660ICC800/ AR1660401	PR031033.D	AR-1016-3 #2		8/2/2018 8:11:04 AM		8/2/2018 9:41:57	Peak Integrated by Software incorrectly
AR1660ICC800/ AR1660401	PR031033.D	Tetrachloro-m-xylene #2		8/2/2018 8:11:04 AM		8/2/2018 9:41:57	Peak Integrated by Software incorrectly
AR1660ICC1600 / AR1660501	PR031034.D	AR-1016-3 #2		8/2/2018 8:11:05 AM		8/2/2018 9:41:57	Peak Integrated by Software incorrectly
AR1242ICC100/ AR1242101	PR031037.D	AR-1242-4 #2		8/2/2018 8:11:06 AM		8/2/2018 9:41:58	Peak Integrated by Software incorrectly
AR1242ICC100/ AR1242101	PR031037.D	AR-1242-5 #2		8/2/2018 8:11:06 AM		8/2/2018 9:41:58	Peak Integrated by Software incorrectly
AR1248ICC100/ AR1248101	PR031042.D	AR-1248-4 #2		8/2/2018 8:11:08 AM		8/2/2018 9:41:59	Peak Integrated by Software incorrectly
AR1248ICC200/ AR1248201	PR031043.D	AR-1248-4 #2		8/2/2018 8:11:09 AM		8/2/2018 9:42:00	Peak Integrated by Software incorrectly
AR1248ICC400/ AR1248301	PR031044.D	AR-1248-4 #2		8/2/2018 8:11:11 AM		8/2/2018 9:42:02	Peak Integrated by Software incorrectly

## Manual Integration Report

Sequence:	PR080418	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1660CCC400 / AR1660360	PR031081.D	Tetrachloro-m-xylene	Non-responsive based on review	8/6/2018 3:26:01 PM	Non-responsive based on review	8/6/2018 3:37:24	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-2		8/6/2018 3:26:02 PM		8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-3		8/6/2018 3:26:02 PM		8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-4		8/6/2018 3:26:02 PM		8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-4 #2		8/6/2018 3:26:02 PM		8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-5		8/6/2018 3:26:02 PM		8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	AR-1242-5 #2		8/6/2018 3:26:02 PM		8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242360	PR031082.D	Tetrachloro-m-xylene		8/6/2018 3:26:02 PM		8/6/2018 3:37:26	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254360	PR031083.D	Tetrachloro-m-xylene		8/6/2018 3:26:04 PM		8/6/2018 3:37:28	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660361	PR031096.D	Tetrachloro-m-xylene #2		8/6/2018 3:26:38 PM		8/6/2018 3:37:59	Peak Integrated by Software incorrectly
PB111642BS/ALCS42	PR031100.D	AR-1260-4		8/6/2018 3:26:39 PM		8/6/2018 3:38:01	Peak Integrated by Software incorrectly
J4178-03/C0AB9	PR031103.D	Decachlorobiphenyl		8/7/2018 9:24:16 AM		8/7/2018 9:24:42	Peak Integrated by Software incorrectly
J4178-03/C0AB9	PR031103.D	Decachlorobiphenyl #2		8/7/2018 9:24:16 AM		8/7/2018 9:24:42	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR080418	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4178-03/C0AB9	PR031103.D	Tetrachloro-m-xylene	Non-responsive based	8/7/2018 9:24:16 AM	Non-responsive based	8/7/2018 9:24:42	Peak Integrated by Software incorrectly
J4178-03/C0AB9	PR031103.D	Tetrachloro-m-xylene #2		8/7/2018 9:24:16 AM		8/7/2018 9:24:42	Peak Integrated by Software incorrectly
J4178-04/C0AC7	PR031104.D	AR-1248-2 #2		8/7/2018 9:24:18 AM		8/7/2018 9:24:43	Peak Integrated by Software incorrectly
J4178-04/C0AC7	PR031104.D	AR-1248-3 #2		8/7/2018 9:24:18 AM		8/7/2018 9:24:43	Peak Integrated by Software incorrectly
J4178-04/C0AC7	PR031104.D	AR-1248-4 #2		8/7/2018 9:24:18 AM		8/7/2018 9:24:43	Peak Integrated by Software incorrectly
J4178-04/C0AC7	PR031104.D	AR-1248-5 #2		8/7/2018 9:24:18 AM		8/7/2018 9:24:43	Peak Integrated by Software incorrectly
J4178-04/C0AC7	PR031104.D	AR-1254-1 #2		8/7/2018 9:24:18 AM		8/7/2018 9:24:43	Peak Integrated by Software incorrectly
J4178-04/C0AC7	PR031104.D	Decachlorobiphenyl		8/7/2018 9:24:18 AM		8/7/2018 9:24:43	Peak Integrated by Software incorrectly
J4178-04/C0AC7	PR031104.D	Decachlorobiphenyl #2		8/7/2018 9:24:18 AM		8/7/2018 9:24:43	Peak Integrated by Software incorrectly
J4178-05/C0AC8	PR031105.D	AR-1254-2		8/6/2018 3:26:43 PM		8/6/2018 3:38:22	Peak Integrated by Software incorrectly
J4178-06/C0AC9	PR031106.D	AR-1254-1 #2		8/6/2018 3:26:44 PM		8/6/2018 3:38:23	Peak Integrated by Software incorrectly
J4178-06/C0AC9	PR031106.D	AR-1254-4 #2		8/6/2018 3:26:44 PM		8/6/2018 3:38:23	Peak Integrated by Software incorrectly
J4178-06/C0AC9	PR031106.D	AR-1254-5 #2		8/6/2018 3:26:44 PM		8/6/2018 3:38:23	Peak Integrated by Software incorrectly

### Manual Integration Report

Sequence:	PR080418	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4178-07/C0AD0	PR031107.D	AR-1254-2	Non-responsive based on review	8/6/2018 3:26:47 PM	Non-responsive based on review	8/6/2018 3:38:24	Peak Integrated by Software incorrectly
J4178-07/C0AD0	PR031107.D	AR-1254-3		8/6/2018 3:26:47 PM		8/6/2018 3:38:24	Peak Integrated by Software incorrectly
J4178-08/C0AD1	PR031108.D	AR-1254-2		8/7/2018 9:24:19 AM		8/7/2018 9:24:44	Peak Integrated by Software incorrectly
J4178-08/C0AD1	PR031108.D	AR-1254-3		8/7/2018 9:24:19 AM		8/7/2018 9:24:44	Peak Integrated by Software incorrectly
J4178-08/C0AD1	PR031108.D	AR-1260-3 #2		8/7/2018 9:24:19 AM		8/7/2018 9:24:44	Peak Integrated by Software incorrectly
J4178-08/C0AD1	PR031108.D	AR-1260-4 #2		8/7/2018 9:24:19 AM		8/7/2018 9:24:44	Peak Integrated by Software incorrectly
J4178-08/C0AD1	PR031108.D	AR-1260-5 #2		8/7/2018 9:24:19 AM		8/7/2018 9:24:44	Peak Integrated by Software incorrectly
J4178-09/C0AD2	PR031109.D	AR-1248-2		8/7/2018 9:24:20 AM		8/7/2018 9:24:45	Peak Integrated by Software incorrectly
J4178-09/C0AD2	PR031109.D	AR-1248-2 #2		8/7/2018 9:24:20 AM		8/7/2018 9:24:45	Peak Integrated by Software incorrectly
J4178-09/C0AD2	PR031109.D	AR-1248-3		8/7/2018 9:24:20 AM		8/7/2018 9:24:45	Peak Integrated by Software incorrectly
J4178-09/C0AD2	PR031109.D	AR-1248-3 #2		8/7/2018 9:24:20 AM		8/7/2018 9:24:45	Peak Integrated by Software incorrectly
J4178-09/C0AD2	PR031109.D	AR-1248-4 #2		8/7/2018 9:24:20 AM		8/7/2018 9:24:45	Peak Integrated by Software incorrectly
J4178-09/C0AD2	PR031109.D	AR-1254-1 #2		8/7/2018 9:24:20 AM		8/7/2018 9:24:45	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR080418	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4178-10MS/C0AD2MS	PR031110.D	AR-1016-2 #2	Non-responsive based on review	8/7/2018 9:24:22 AM	Non-responsive based on review	8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1016-3 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1248-2 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1248-3 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1248-4 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1248-5 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1254-1 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1260-3 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1260-4 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-10MS/C0AD2MS	PR031110.D	AR-1260-5 #2		8/7/2018 9:24:22 AM		8/7/2018 9:24:47	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1016-2 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1016-3 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1248-2 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR080418	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1248-3 #2	Non-responsive base	8/7/2018 9:24:23 AM	Non-responsive	8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1248-4 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1248-5 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1254-1 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1260-3 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1260-4 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
J4178-11MSD/C0AD2MSD	PR031111.D	AR-1260-5 #2		8/7/2018 9:24:23 AM		8/7/2018 9:24:48	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660362	PR031122.D	Tetrachloro-m-xylene #2		8/6/2018 3:26:59 PM		8/6/2018 3:38:32	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242362	PR031123.D	AR-1242-4 #2		8/6/2018 3:27:00 PM		8/6/2018 3:38:33	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242362	PR031123.D	AR-1242-5 #2		8/6/2018 3:27:00 PM		8/6/2018 3:38:33	Peak Integrated by Software incorrectly
AR1242CCC400 / AR1242362	PR031123.D	Tetrachloro-m-xylene #2		8/6/2018 3:27:00 PM		8/6/2018 3:38:33	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-1 #2		8/6/2018 3:27:02 PM		8/6/2018 3:38:34	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-2		8/6/2018 3:27:02 PM		8/6/2018 3:38:34	Peak Integrated by Software incorrectly



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### Manual Integration Report

Sequence:	PR080418	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-2 #2	Non-responsive bas	8/6/2018 3:27:02 PM	Non-responsive	8/6/2018 3:38:34	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254362	PR031124.D	AR-1254-3		8/6/2018 3:27:02 PM		8/6/2018 3:38:34	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR080518	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
J4178-05DL/ C0AC8DL	PR031131.D	AR-1254-5	Non-responsive base peak	8/6/2018 3:24:10 PM	Non-responsive base peak	8/7/2018 9:25:47	Peak Integrated by Software incorrectly
J4178-07DL/ C0AD0DL	PR031133.D	AR-1254-2		8/6/2018 3:24:11 PM		8/7/2018 9:25:49	Peak Integrated by Software incorrectly
J4178-07DL/ C0AD0DL	PR031133.D	AR-1254-3		8/6/2018 3:24:11 PM		8/7/2018 9:25:49	Peak Integrated by Software incorrectly
J4178-08DL/ C0AD1DL	PR031134.D	AR-1254-2		8/7/2018 9:24:45 AM		8/7/2018 9:25:51	Peak Integrated by Software incorrectly
J4178-08DL/ C0AD1DL	PR031134.D	AR-1254-3		8/7/2018 9:24:45 AM		8/7/2018 9:25:51	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-1		8/6/2018 3:25:27 PM		8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-1 #2		8/6/2018 3:25:27 PM		8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-2		8/6/2018 3:25:27 PM		8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-2 #2		8/6/2018 3:25:27 PM		8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	AR-1260-3 #2		8/6/2018 3:25:27 PM		8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660366	PR031166.D	Tetrachloro-m-xylene #2		8/6/2018 3:25:27 PM		8/7/2018 9:26:53	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254366	PR031167.D	Decachlorobiphenyl #2		8/6/2018 3:25:28 PM		8/7/2018 9:26:54	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-1		8/6/2018 3:25:31 PM		8/7/2018 9:26:57	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR080518	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-1 #2	Non-responsive based on review	8/6/2018 3:25:31 PM	Non-reviewed by supervisor	8/7/2018 9:26:57	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-2	Non-reviewed by supervisor	8/6/2018 3:25:31 PM	Non-reviewed by supervisor	8/7/2018 9:26:57	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660367	PR031173.D	AR-1260-2 #2	Non-reviewed by supervisor	8/6/2018 3:25:31 PM	Non-reviewed by supervisor	8/7/2018 9:26:57	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254367	PR031174.D	Decachlorobiphenyl #2	Non-reviewed by supervisor	8/8/2018 12:06:45 PM	Non-reviewed by supervisor	8/8/2018 12:06:54	Peak Integrated by Software incorrectly

### Manual Integration Report

Sequence:	PR080918	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-1	Non-responsive based on review	8/8/2018 10:34:48 AM	Non-responsive due to software issue	8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-1 #2		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-2		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-2 #2		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-3		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-4		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-4 #2		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1016-5		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1260-1		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1260-1 #2		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1260-2		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1260-4		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1260-4 #2		8/8/2018 10:34:48 AM		8/8/2018 2:51:24	Peak Integrated by Software incorrectly

### Manual Integration Report

Sequence:	PR080918	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1660ICC100/ AR1660101	PR031278.D	AR-1260-5	Non-responsive based on review	8/8/2018 10:34:48 AM	Non-responsive based on review	8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	AR-1260-5 #2	Non-responsive based on review	8/8/2018 10:34:48 AM	Non-responsive based on review	8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	Decachlorobiphenyl	Non-responsive based on review	8/8/2018 10:34:48 AM	Non-responsive based on review	8/8/2018 2:51:24	Peak Integrated by Software incorrectly
AR1660ICC100/ AR1660101	PR031278.D	Tetrachloro-m-xylene	Non-responsive based on review	8/8/2018 10:34:48 AM	Non-responsive based on review	8/8/2018 2:51:24	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR081118	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AIBLK80/ AIBLK80	PR031317.D	Tetrachloro-m-xylene	Non-responsive based on reviewer's response	8/9/2018 10:17:25 AM	Non-responsive based on supervisor's response	8/9/2018 1:42:45	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660370	PR031318.D	AR-1260-1 #2		8/9/2018 10:17:26 AM		8/9/2018 1:42:47	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660370	PR031318.D	AR-1260-2 #2		8/9/2018 10:17:26 AM		8/9/2018 1:42:47	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248370	PR031319.D	AR-1248-5 #2		8/9/2018 10:17:27 AM		8/9/2018 1:42:50	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660371	PR031329.D	AR-1016-3		8/9/2018 10:17:28 AM		8/9/2018 1:42:52	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248371	PR031330.D	AR-1248-5 #2		8/9/2018 10:17:29 AM		8/9/2018 1:42:53	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660372	PR031352.D	AR-1016-3		8/9/2018 10:18:53 AM		8/9/2018 1:43:15	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660372	PR031352.D	AR-1260-3		8/9/2018 10:18:53 AM		8/9/2018 1:43:15	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248372	PR031353.D	AR-1248-5 #2		8/9/2018 10:18:54 AM		8/9/2018 1:43:17	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660373	PR031377.D	AR-1016-3		8/9/2018 10:20:27 AM		8/9/2018 1:43:48	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660373	PR031377.D	AR-1016-5 #2		8/9/2018 10:20:27 AM		8/9/2018 1:43:48	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660373	PR031377.D	AR-1260-3		8/9/2018 10:20:27 AM		8/9/2018 1:43:48	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248373	PR031378.D	AR-1248-2		8/9/2018 10:20:28 AM		8/9/2018 1:43:50	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR081118	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1248CCC400 / AR1248373	PR031378.D	AR-1248-3	Non-responsive based on review	8/9/2018 10:20:28 AM	Non-responsive based on review	8/9/2018 1:43:50	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248373	PR031378.D	AR-1248-4		8/9/2018 10:20:28 AM		8/9/2018 1:43:50	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248373	PR031378.D	AR-1248-5		8/9/2018 10:20:28 AM		8/9/2018 1:43:50	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248373	PR031378.D	AR-1248-5 #2		8/9/2018 10:20:28 AM		8/9/2018 1:43:50	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254373	PR031379.D	AR-1254-1 #2		8/9/2018 10:20:29 AM		8/9/2018 1:43:52	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254373	PR031379.D	AR-1254-2 #2		8/9/2018 10:20:29 AM		8/9/2018 1:43:52	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660374	PR031383.D	AR-1016-3		8/9/2018 10:20:33 AM		8/9/2018 1:43:58	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660374	PR031383.D	AR-1016-5		8/9/2018 10:20:33 AM		8/9/2018 1:43:58	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660374	PR031383.D	AR-1016-5 #2		8/9/2018 10:20:33 AM		8/9/2018 1:43:58	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660374	PR031383.D	AR-1260-1		8/9/2018 10:20:33 AM		8/9/2018 1:43:58	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660374	PR031383.D	AR-1260-1 #2		8/9/2018 10:20:33 AM		8/9/2018 1:43:58	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660374	PR031383.D	AR-1260-3		8/9/2018 10:20:33 AM		8/9/2018 1:43:58	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248374	PR031384.D	AR-1248-2		8/9/2018 10:20:34 AM		8/9/2018 1:43:59	Peak Integrated by Software incorrectly

**Manual Integration Report**

Sequence:	PR081118	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
AR1248CCC400 / AR1248374	PR031384.D	AR-1248-3		8/9/2018 10:20:34 AM		8/9/2018 1:43:59	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248374	PR031384.D	AR-1248-4		8/9/2018 10:20:34 AM		8/9/2018 1:43:59	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248374	PR031384.D	AR-1248-5		8/9/2018 10:20:34 AM		8/9/2018 1:43:59	Peak Integrated by Software incorrectly
AR1248CCC400 / AR1248374	PR031384.D	AR-1248-5 #2		8/9/2018 10:20:34 AM		8/9/2018 1:43:59	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254374	PR031385.D	AR-1254-1		8/9/2018 10:20:36 AM		8/9/2018 1:44:01	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254374	PR031385.D	AR-1254-1 #2		8/9/2018 10:20:36 AM		8/9/2018 1:44:01	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254374	PR031385.D	AR-1254-2 #2		8/9/2018 10:20:36 AM		8/9/2018 1:44:01	Peak Integrated by Software incorrectly
AR1254CCC400 / AR1254374	PR031385.D	AR-1254-4		8/9/2018 10:20:36 AM		8/9/2018 1:44:01	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660375	PR031390.D	AR-1016-3		8/9/2018 11:29:46 AM		8/9/2018 1:44:04	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660375	PR031390.D	AR-1016-5		8/9/2018 11:29:46 AM		8/9/2018 1:44:04	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660375	PR031390.D	AR-1016-5 #2		8/9/2018 11:29:46 AM		8/9/2018 1:44:04	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660375	PR031390.D	AR-1260-1 #2		8/9/2018 11:29:46 AM		8/9/2018 1:44:04	Peak Integrated by Software incorrectly
AR1660CCC400 / AR1660375	PR031390.D	AR-1260-3		8/9/2018 11:29:46 AM		8/9/2018 1:44:04	Peak Integrated by Software incorrectly



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### Manual Integration Report

Sequence:	PR081118	Instrument	ECD_r
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
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FORM 2A-OR  
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group

Contract: EPW14030

Lab Code CHM Case No 47768

MA No.: \_\_\_\_\_ SDG No.: C0AB7

Analytical Method : SVOA

Level Low

Matrix Soil

EPA Sample No .	DMC1 (DXE)	DMC2 (PHL)	DMC3 (BCE)	DMC4 (2CP)	DMC5 (4MP)	DMC6 (NBZ)	DMC7 (2NP)	DMC8 (DCP)	DMC9 (4CA)
C0AB7	36 *	28	33	34	29	36	36	32	33
C0AB8	62	60	68	62	62	64	58	58	73
C0AB9	32 *	35	41	38	35	43	41	39	30
C0AB9DL	33 D	33	39	39	32	45	43	41	35
C0AC7	46	37	42	45	35	50	49	43	25
C0AC8	39 *	35	38	41	32	45	45	40	36
C0AC9	31 *	27	32	33	25	35	36	32	29
C0AD0	32 *	24	28	29	23	31	30	27	20
C0AD1	46	52	59	54	54	58	56	53	64
C0AD2	9 *	25	26	29	25	34	35	30	14
SBLK60	46	43	48	48	45	58	56	53	67

QC LIMITS

DMC1 (DXE) = 1,4-Dioxane-d8	40	-	110	15-120
DMC2 (PHL) = Phenol-d5	10	-	130	MM
DMC3 (BCE) = Bis (2-Chloroethyl)ether-d8	10	-	150	9/7/18
DMC4 (2CP) = 2-Chlorophenol-d4	15	-	120	
DMC5 (4MP) = 4-Methylphenol-d8	10	-	140	
DMC6 (NBZ) = Nitrobenzene-d5	10	-	135	
DMC7 (2NP) = 2-Nitrophenol-d4	10	-	120	
DMC8 (DCP) = 2,4-Dichlorophenol-d3	10	-	140	
DMC9 (4CA) = 4-Chloroaniline-d4	1	-	145	

## FORM 2B-OR

## DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name : Chemtech Consulting Group

Lab Code : CHM Case No.: 47768

Analytical Method : SVOA

Matrix : Soil

Contract : EPW14030

MA No.: SDG No.: C0AB7

Level : Low

EPA Sample No .	DMC10 (DMP)	DMC11 ACY	DMC12 (4NP)	DMC13 (FLR)	DMC14 (NMP)	DMC15 (ANC)	DMC16 (PYR)	DMC17 (BAP)	Tot Out
C0AB7	36	37	8 *	34	11	38	44	40	2
C0AB8	66	66	35	66	39	69	82	70	0
C0AB9	46	46	30	42	44	48	54	50	1
C0AB9DL	48	46	10	49	19	47	113	51	1
C0AC7	48	49	21	45	30	49	58	51	0
C0AC8	44	45	22	41	28	45	54	48	1
C0AC9	36	37	17	34	18	36	43	38	1
C0AD0	31	30	14	29	20	31	34	27	1
C0AD1	59	62	34	58	40	62	72	59	0
C0AD2	37	35	20	34	20	35	39	31	1
SBLK60	73	68	41	66	56	76	92	74	0

OC LIMITS

DMC10 (DMP) = Dimethylphthalate-d6	10 - 145
DMC11 (ACY) = Acenaphthylene-d8	15 - 120
DMC12 (4NP) = 4-Nitrophenol-d4	10 - 150
DMC13 (FLR) = Fluorene-d10	20 - 140
DMC14 (NMP) = 4,6-Dinitro-2-methylphenol-d2	10 - 130
DMC15 (ANC) = Anthracene-d10	10 - 150
DMC16 (PYR) = Pyrene-d10	10 - 130
DMC17 (BAP) = Benzo(a)pyrene-d12	10 - 140

FORM 4-OR  
METHOD BLANK SUMMARY

SBLK60

Lab Name : <u>Chemtech Consulting Group</u>	Contract : <u>EPW14030</u>
Lab Code: <u>CHM</u>	MA No. : _____ sdg no.: <u>C0AB7</u>
Analytical Method: <u>SVOA</u>	Level : <u>Low</u>
Matrix : <u>Soil</u>	Lab Sample ID: <u>PB111660BL</u>
Instrument ID: <u>BNA_M</u>	Lab File ID : <u>BM016172.D</u>
Extraction Type : <u>SOXH</u>	Date Extracted : <u>08/01/2018</u>
GC Column ( ) : <u>ZB-GR</u> ID : <u>0.25</u> (mm)	Date Analyzed : <u>08/03/2018</u>
GC Column ( ) : _____ ID : _____ (mm)	Time Analyzed : <u>10:26</u>
Heated Purge: (Y/N) _____ Cleanup(Y/N): <u>Y</u>	Cleanup Types : <u>GPC</u>

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
C0AB8	J4178-02	BN002217.D	08/03/2018 11:01
C0AB7	J4178-01	BM016173.D	08/03/2018 11:02
C0AC9	J4178-06	BM016175.D	08/03/2018 12:16
C0AC7	J4178-04	BM016176.D	08/03/2018 12:52
C0AC8	J4178-05	BM016177.D	08/03/2018 13:28
C0AD0	J4178-07	BM016178.D	08/03/2018 14:05
C0AD2	J4178-09	BM016179.D	08/03/2018 14:41
C0AD1	J4178-08	BN002223.D	08/03/2018 15:09
C0AB9DL	J4178-03DL	BM016181.D	08/03/2018 15:54
C0AB9	J4178-03	BN002244.D	08/08/2018 10:39

FORM 5-OR  
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

DFTPP28

Lab Name : Chemtech Consulting Group  
 Lab Code: CHM Case No.: 47768  
 Analytical Method : SVOA  
 Instrument ID: BNA\_M  
 GC Column : ZB-GR ID : 0.25 (mm)  
 Injection Date : 07/13/2018

Contract : EPW14030  
 MA No. : \_\_\_\_\_ SDG No.: C0AB7  
 Lab File ID : BM015937.D  
 BFB / DFTPP : DFTPP  
 Injection Time : 10:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	57.3
68	Less than 2.0% of mass 69	1(2)
69	Present	48.9
70	Less than 2.0% of mass 69	0.1(0.2)
127	10.0 - 80.0% of mass 198	57
197	Less than 2.0% of mass 198	0.6
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	29.2
365	Greater than 1% of mass 198	6.7
441	Present, but less than mass 443	11.7
442	Greater than 50.0% of mass 198	70.8
443	15.0 - 24.0% of mass 442	13.9(19.7)

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD00529	SSTD00529	BM015938.D	07/13/2018	11:23
SSTD01030	SSTD01030	BM015939.D	07/13/2018	12:11
SSTD02031	SSTD02031	BM015940.D	07/13/2018	12:47
SSTD04032	SSTD04032	BM015941.D	07/13/2018	13:24
SSTD08033	SSTD08033	BM015942.D	07/13/2018	14:01
SSTD16034	SSTD16034	BM015943.D	07/13/2018	14:38
SICV35	SSTDICV020	BM015944.D	07/13/2018	15:21

FORM 5-OR  
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

DFTPP37

Lab Name : Chemtech Consulting Group  
 Lab Code: CHM Case No.: 47768  
 Analytical Method : SVOA  
 Instrument ID: BNA\_M  
 GC Column : ZB-GR ID : 0.25 (mm)  
 Injection Date : 08/03/2018

Contract : EPW14030  
 MA No. : \_\_\_\_\_ SDG No.: C0AB7  
 Lab File ID : BM016170.D  
 BFB / DFTPP : DFTPP  
 Injection Time : 08:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	64.6
68	Less than 2.0% of mass 69	1.1(2) 1
69	Present	53.3
70	Less than 2.0% of mass 69	0.3(0.5) 1
127	10.0 - 80.0% of mass 198	61.1
197	Less than 2.0% of mass 198	0.9
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 60.0% of mass 198	29.2
365	Greater than 1% of mass 198	7.3
441	Present, but less than mass 443	10.2
442	Greater than 50.0% of mass 198	62.3
443	15.0 - 24.0% of mass 442	12.8(20.5) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02057	SSTDCCC020	BM016171.D	08/03/2018	09:12
SBLK60	PB111660BL	BM016172.D	08/03/2018	10:26
C0AB7	J4178-01	BM016173.D	08/03/2018	11:02
C0AC9	J4178-06	BM016175.D	08/03/2018	12:16
C0AC7	J4178-04	BM016176.D	08/03/2018	12:52
C0AC8	J4178-05	BM016177.D	08/03/2018	13:28
C0AD0	J4178-07	BM016178.D	08/03/2018	14:05
C0AD2	J4178-09	BM016179.D	08/03/2018	14:41
C0AB9DL	J4178-03DL	BM016181.D	08/03/2018	15:54
SSTD02058	SSTDCCC020	BM016182.D	08/03/2018	16:31

FORM 5-OR  
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

DFTPP90

Lab Name : Chemtech Consulting Group  
 Lab Code: CHM Case No.: 47768  
 Analytical Method : SVOA  
 Instrument ID: BNA\_N  
 GC Column : ZB-GR ID : 0.25 (mm)  
 Injection Date : 07/13/2018

Contract : EPW14030  
 MA No. : \_\_\_\_\_ SDG No.: C0AB7  
 Lab File ID : BN002027.D  
 BFB / DFTPP : DFTPP  
 Injection Time : 10:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.3
68	Less than 2.0% of mass 69	0.6(1.6) 1
69	Present	37.8
70	Less than 2.0% of mass 69	0.2(0.5) 1
127	10.0 - 80.0% of mass 198	46.1
197	Less than 2.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.5
365	Greater than 1% of mass 198	3
441	Present, but less than mass 443	13.4
442	Greater than 50.0% of mass 198	87
443	15.0 - 24.0% of mass 442	16.9(19.4) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD00501	SSTD00501	BN002028.D	07/13/2018	11:32
SSTD01002	SSTD01002	BN002029.D	07/13/2018	12:08
SSTD02003	SSTD02003	BN002030.D	07/13/2018	12:43
SSTD04004	SSTD04004	BN002031.D	07/13/2018	13:18
SSTD08005	SSTD08005	BN002032.D	07/13/2018	13:53
SSTD16006	SSTD16006	BN002033.D	07/13/2018	14:28
SICV07	SSTDICV020	BN002034.D	07/13/2018	15:10

FORM 5-OR  
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

DFTPP95

Lab Name : Chemtech Consulting Group  
 Lab Code: CHM Case No.: 47768  
 Analytical Method : SVOA  
 Instrument ID: BNA\_N  
 GC Column : ZB-GR ID : 0.25 (mm)  
 Injection Date : 08/03/2018

Contract : EPW14030  
 MA No. : \_\_\_\_\_ SDG No.: C0AB7  
 Lab File ID : BN002214.D  
 BFB / DFTPP : DFTPP  
 Injection Time : 08:42

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	38.8
68	Less than 2.0% of mass 69	0.7(1.7) 1
69	Present	39.8
70	Less than 2.0% of mass 69	0.2(0.5) 1
127	10.0 - 80.0% of mass 198	47.4
197	Less than 2.0% of mass 198	0.6
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.9
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	13.3
442	Greater than 50.0% of mass 198	86.5
443	15.0 - 24.0% of mass 442	17.6(20.3) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02022	SSTDCCC020	BN002215.D	08/03/2018	09:17
C0AB8	J4178-02	BN002217.D	08/03/2018	11:01
C0AD1	J4178-08	BN002223.D	08/03/2018	15:09
SSTD02023	SSTDCCC020	BN002225.D	08/03/2018	16:20

FORM 5-OR  
GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

DFTPP97

Lab Name : Chemtech Consulting Group  
 Lab Code: CHM Case No.: 47768  
 Analytical Method : SVOA  
 Instrument ID: BNA\_N  
 GC Column : ZB-GR ID : 0.25 (mm)  
 Injection Date : 08/08/2018

Contract : EPW14030  
 MA No. :                  SDG No.: C0AB7  
 Lab File ID : BN002241.D  
 BFB / DFTPP : DFTPP  
 Injection Time : 08:18

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	38.1
68	Less than 2.0% of mass 69	0.7(1.7) 1
69	Present	39.8
70	Less than 2.0% of mass 69	0.2(0.5) 1
127	10.0 - 80.0% of mass 198	47.4
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	26.8
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	13.8
442	Greater than 50.0% of mass 198	91.5
443	15.0 - 24.0% of mass 442	18.2(19.9) 2

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTD02027	SSTDCCC020	BN002242.D	08/08/2018	09:29
C0AB9	J4178-03	BN002244.D	08/08/2018	10:39
SSTD02028	SSTDCCC020EC	BN002256.D	08/08/2018	17:45

FORM 6A-OR  
GC/MS INITIAL CALIBRATION DATA

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No.: 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method : SVOA Level : \_\_\_\_\_  
 Instrument ID: BNA\_N Calibration Date(s): 07/13/2018 07/13/2018  
 GC Column: ZB-GR ID: 0.25 (mm) Calibration Time(s): 11:32 14:28  
 Length : 30 (m) Heated Purge: (Y/N) Purge Volume : \_\_\_\_\_ (mL)

LAB FILE ID:	RRF005 =BN002028.D	RRF010= BN002029.D	RRF020 =BN002030.D					
ANALYTE	RRF005	RRF010	RRF020	RRF040	RRF080	RRF160	RRF	% RSD
Acenaphthene	1.484	1.452	1.382	1.398	1.271		1.397	5.9
2,4-Dinitrophenol		0.162	0.186	0.220	0.226	0.238	0.206	15.3
4-Nitrophenol		0.227	0.226	0.238	0.221	0.220	0.226	3.2
Dibenzofuran	2.127	2.079	1.956	1.974	1.736		1.974	7.7
2,4-Dinitrotoluene	0.502	0.520	0.506	0.531	0.485		0.509	3.4
Diethylphthalate	1.770	1.757	1.685	1.701	1.518		1.686	6.0
Fluorene	1.731	1.679	1.566	1.554	1.351		1.576	9.3
4-Chlorophenyl-phenylether	0.860	0.828	0.776	0.771	0.679		0.783	8.8
4-Nitroaniline		0.422	0.402	0.430	0.364	0.384	0.401	6.8
4,6-Dinitro-2-methylphenol		0.128	0.132	0.142	0.138	0.134	0.135	3.9
N-Nitrosodiphenylamine	0.644	0.639	0.609	0.608	0.560		0.612	5.5
4-Bromophenyl-phenylether	0.227	0.225	0.217	0.221	0.210		0.220	3.0
1,2,4,5-Tetrachlorobenzene	0.678	0.672	0.636	0.647	0.609		0.649	4.3
Hexachlorobenzene	0.256	0.251	0.240	0.245	0.226		0.244	4.7
Atrazine		0.234	0.228	0.232	0.215	0.195	0.221	7.3
Pentachlorophenol		0.128	0.132	0.148	0.143	0.142	0.139	6.0
Phenanthrene	1.212	1.190	1.118	1.123	0.974		1.123	8.3
Anthracene	1.243	1.219	1.144	1.143	0.972		1.144	9.3
Carbazole		1.095	1.031	1.044	0.901	0.768	0.968	13.7
Di-n-butylphthalate	1.356	1.363	1.302	1.294	1.082		1.279	9.0
Fluoranthene		1.410	1.319	1.323	1.092	0.817	1.192	20.2
Pyrene	1.336	1.346	1.280	1.265	1.190		1.283	4.9
Butylbenzylphthalate	0.612	0.617	0.599	0.614	0.607		0.610	1.2
3,3-Dichlorobenzidine		0.440	0.472	0.471	0.378	0.359	0.424	12.4
Benzo(a)anthracene	1.356	1.337	1.261	1.273	1.143		1.274	6.6
Chrysene	1.273	1.259	1.189	1.171	1.045		1.187	7.6
Bis(2-ethylhexyl)phthalate	0.920	0.903	0.853	0.851	0.789		0.863	6.0
Di-n-octyl phthalate		1.499	1.428	1.385	1.343	0.913	1.314	17.6
Benzo(b)fluoranthene	1.291	1.257	1.187	1.236	1.185		1.231	3.7
Benzo(k)fluoranthene	1.225	1.250	1.169	1.130	1.072		1.169	6.1
Benzo(a)pyrene	1.225	1.238	1.153	1.161	1.071		1.170	5.7
Indeno(1,2,3-cd)pyrene	1.472	1.441	1.349	1.386	1.112		1.352	10.5
Dibenzo(a,h)anthracene	1.249	1.216	1.122	1.149	0.922		1.132	11.3

## FORM 7A-OR

## INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No.: 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: SVOA Level: \_\_\_\_\_  
 Instrument ID: BNA M Date Analyzed: 08/03/2018 Time: 09:12  
 Lab File ID: BM016171.D Init. Calib Date(s): 07/13/2018 07/13/2018  
 EPA Sample No.: SSTD02057 Init. Calib Time(s): 11:23 14:38  
 GC Column: ZB-GR ID: 0.25 (mm) Length: 30 \_\_\_\_\_ (m)  
 Heated Purge: (Y/N) \_\_\_\_\_ Purge Volume: \_\_\_\_\_ (mL)

ANALYTE	RRF	RRF020	MIN RRF	%D	MAX %D
Di-n-butylphthalate	1.412	1.439	0.50	1.9	± 20.0
Fluoranthene	1.484	1.138	0.10	-23.3	± 20.0
Pyrene	1.179	1.394	0.40	18.3	± 25.0
Butylbenzylphthalate	0.567	0.742	0.10	30.8	± 25.0
3,3-Dichlorobenzidine	0.440	0.432	0.01	-1.9	± 40.0
Benzo(a)anthracene	1.293	1.296	0.30	0.2	± 20.0
Chrysene	1.210	1.205	0.20	-0.4	± 20.0
Bis(2-ethylhexyl)phthalate	0.832	1.051	0.20	26.3	± 25.0
Di-n-octyl phthalate	1.566	1.701	0.01	8.6	± 40.0
Benzo(b)fluoranthene	1.283	1.231	0.01	-4.0	± 25.0
Benzo(k)fluoranthene	1.226	1.164	0.01	-5.1	± 25.0
Benzo(a)pyrene	1.234	1.169	0.01	-5.3	± 20.0
Indeno(1,2,3-cd)pyrene	1.517	1.412	0.01	-6.9	± 25.0
Dibenzo(a,h)anthracene	1.284	1.188	0.01	-7.5	± 25.0
Benzo(g,h,i)perylene	1.213	1.129	0.01	-6.9	± 30.0
2,3,4,6-Tetrachlorophenol	0.388	0.341	0.04	-12.0	± 20.0
1,4-Dioxane-d8	0.454	0.543	0.01	19.6	± 25.0
Phenol-d5	1.828	1.644	0.01	-10.1	± 25.0
Bis-(2-Chloroethyl)ether-d8	1.150	1.087	0.10	-5.5	± 20.0
2-Chlorophenol-d4	1.484	1.533	0.20	3.3	± 20.0
4-Methylphenol-d8	1.565	1.363	0.01	-12.9	± 20.0
Nitrobenzene-d5	0.144	0.151	0.05	4.8	± 20.0
2-Nitrophenol-d4	0.163	0.172	0.05	5.5	± 20.0
2,4-Dichlorophenol-d3	0.316	0.317	0.06	0.4	± 20.0
4-Chloroaniline-d4	0.385	0.407	0.01	5.8	± 40.0
Dimethylphthalate-d6	1.823	1.790	0.30	-1.8	± 20.0

## FORM 7A-OR

## INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/MS

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No.: 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: SVOA Level: \_\_\_\_\_  
 Instrument ID: BNA\_M Date Analyzed: 08/03/2018 Time: 16:31  
 Lab File ID: BM016182.D Init. Calib Date(s): 07/13/2018 07/13/2018  
 EPA Sample No.: SSTD02058 Init. Calib Time(s): 11:23 14:38  
 GC Column: ZB-GR ID: 0.25 (mm) Length: 30 \_\_\_\_\_ (m)  
 Heated Purge: (Y/N) \_\_\_\_\_ Purge Volume: \_\_\_\_\_ (mL)

ANALYTE	RRF	RRF020	MIN RRF	%D	MAX %D
1,4-Dioxane	0.443	0.458	0.01	3.3	± 40.0
Benzaldehyde	1.175	1.132	0.10	-3.7	± 40.0
Phenol	1.835	1.529	0.08	-16.7	± 20.0
Bis(2-Chloroethyl)ether	1.355	1.190	0.10	-12.2	± 20.0
2-Chlorophenol	1.474	1.427	0.20	-3.2	± 20.0
2-Methylphenol	1.412	1.163	0.01	-17.6	± 20.0
2,2-oxybis(1-Chloropropane)	2.153	1.879	0.01	-12.7	± 25.0
Acetophenone	2.601	2.105	0.06	-19.0	± 20.0
4-Methylphenol	1.559	1.245	0.01	-20.2	± 20.0
N-Nitroso-di-n-propylamine	1.301	1.089	0.08	-16.3	± 25.0
Hexachloroethane	0.663	0.721	0.10	8.7	± 20.0
Nitrobenzene	0.406	0.434	0.09	6.9	± 20.0
Isophorone	0.708	0.695	0.10	-1.9	± 20.0
2-Nitrophenol	0.175	0.185	0.06	5.3	± 20.0
2,4-Dimethylphenol	0.401	0.396	0.05	-1.2	± 25.0
Bis(2-Chloroethoxy)methane	0.412	0.384	0.08	-6.7	± 20.0
2,4-Dichlorophenol	0.310	0.313	0.06	1.1	± 20.0
Naphthalene	1.060	1.034	0.20	-2.5	± 20.0
4-Chloroaniline	0.384	0.387	0.01	0.8	± 40.0
Hexachlorobutadiene	0.217	0.236	0.04	8.7	± 20.0
Caprolactam	0.104	0.078	0.01	-25.3	± 30.0
4-Chloro-3-methylphenol	0.364	0.309	0.04	-15.0	± 20.0
2-Methylnaphthalene	0.786	0.712	0.10	-9.5	± 20.0
Hexachlorocyclopentadiene	0.294	0.211	0.01	-28.3	± 40.0
2,4,6-Trichlorophenol	0.401	0.435	0.09	8.6	± 20.0
2,4,5-Trichlorophenol	0.426	0.434	0.10	1.8	± 20.0

\* OK for closing CCV +/- 25% MM 9/8/18

FORM 2C-OR  
SURROGATE RECOVERY

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No.: 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO  
 Matrix: Soil  
 GC Column(1) : ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)

EPA SAMPLE	SUR(TCX) 1-1 %R	SUR(TCX) 1-2 %R	SUR(DCB) 2-1 %R	SUR(DCB) 2-2 %R	OTHER (1)	OTHER (2)	TOT OUT
ABLK42	114	109	115	117			0
ALCS42	109	100	114	115			0
C0AB7	119	122	81	82			0
C0AB8	83	82	50	53			0
C0AB9	48	101	29 *	32			1
C0AC7	56	68	63	57			0
C0AC7DL	0 D	0 D	0 D	0 D			4
C0AC8	94	101	52	83			0
C0AC8DL	87	104	96	96			0
C0AC9	127	124	107	88			0
C0AC9DL	0 D	0 D	0 D	0 D			4
C0AD0	95	100	72	83			0
C0AD0DL	74	78	89	103			0
C0AD1	59	64	48	47			0
C0AD1DL	52	70	66	74			0
C0AD2	101	103	61	66			0
C0AD2DL	0 D	0 D	0 D	0 D			4
C0AD2MS	70	71	48	54			0
C0AD2MSD	64	65	50	52			0

QC LIMITS

(30-150)

(30-150)

TCX = Tetrachloro-m-xylene

DCB = Decachlorobiphenyl

FORM 3A-OR  
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030  
 Lab Code : CHM Case No. : 47768 MA No .: \_\_\_\_\_ SDG No. : C0AB7  
 Analytical Method : ARO Level : \_\_\_\_\_  
 Matrix Soil  
 EPA Sample No.(Matrix Spike/Matrix Spike Duplicate) : C0AD2  
 Instrument ID : ECD\_R GC Column ZB-MR1 ID : 0.32 (mm)  
 Concentration Units (ug/L,mg/L ug/kg) : ug/kg

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
AR1016	220	0.0	11000	5015 *	29 - 135
AR1260	220	0.0	14000	6146 *	29 - 135

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
AR1016	220	11000	4703 *	6	15	29 - 135
AR1260	220	13000	6042 *	2	20	29 - 135

FORM 3A-OR  
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name : Chemtech Consulting Group Contract : EPW14030  
 Lab Code : CHM Case No. : 47768 MA No. : \_\_\_\_\_ SDG No. : C0AB7  
 Analytical Method : ARO Level : \_\_\_\_\_  
 Matrix Soil  
 EPA Sample No.(Matrix Spike/Matrix Spike Duplicate) : C0AD2  
 Instrument ID : ECD\_R GC Column ZB-MR2 ID : 0.32 (mm)  
 Concentration Units (ug/L,mg/L ug/kg) : ug/kg

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC Limits %R
AR1016	220	0.0	9600	4278 *	29 - 135
AR1260	220	0.0	7000	3129 *	29 - 135

ANALYTE	SPIKE AADDED	MSD CONCENTRATION	MSD %R #	RPD	QC Limits	
					RPD	%R
AR1016	220	9200	4102 *	4	15	29 - 135
AR1260	220	6900	3091 *	1	20	29 - 135

FORM 3B-OR  
 LABORATORY CONTROL  
 SAMPLE RECOVERY

EPA SAMPLE NO.

ALCS42

Lab Name : Chemtech Consulting Group

Contract : EPW14030

Lab Code : CHM Case No. : 47768

MA No. : SDG No.: C0AB7

Analytical Method: ARO

Matrix : Soil

Lab Sample ID : PB111642BS

LCS Lot No. : PP13959

Date Extracted : 07/31/2018

Concentration Units (ug/L, mg/L, ug/kg) : ug/kg

Instrument ID ( 1 ) : ECD\_R GC Column ( 1 ) : ZB-MR1 ID : 0.32 (mm)

Date Analyzed ( 1 ) : 08/02/2018

ANALYTE	AMOUNT ADDED	AMOUNT RECOVERED	% R	QC LIMITS
AR1016	33.33	48	144	50-150
AR1260	33.33	45	135	50-150

Instrument ID ( 2 ) : ECD\_R GC Column ( 2 ) : ZB-MR2 ID : 0.32 (mm)

Date Analyzed ( 2 ) : 08/02/2018

ANALYTE	AMOUNT ADDED	AMOUNT RECOVERED	% R	QC LIMITS
AR1016	33.33	45	135	50-150
AR1260	33.33	42	127	50-150

Lab Name : Chemtech Consulting Group Contract : EPW14030  
 Lab Code: CHM Case No.: 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Level : \_\_\_\_\_  
 Matrix : Soil Lab Sample ID : PB111642BL  
 Instrument ID: ECD\_R Lab File ID : PR031099.D  
 Extraction Type: SOXH Date Extracted : 07/31/2018  
 GC Column (1) : ZB-MR1 ID : 0.32 (mm) Date Analyzed : 08/02/2018  
 GC Column (2) : ZB-MR2 ID : 0.32 (mm) Time Analyzed : 22:30  
 Heated Purge : (Y/N) \_\_\_\_\_ Cleanup(Y/N) : Y Cleanup Types : Acid

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
ALCS42	PB111642BS	PR031100.D	08/02/2018 22:44
C0AB7	J4178-01	PR031101.D	08/02/2018 22:59
C0AB8	J4178-02	PR031102.D	08/02/2018 23:13
C0AB9	J4178-03	PR031103.D	08/02/2018 23:28
C0AC7	J4178-04	PR031104.D	08/02/2018 23:42
C0AC8	J4178-05	PR031105.D	08/02/2018 23:57
C0AC9	J4178-06	PR031106.D	08/03/2018 00:11
C0AD0	J4178-07	PR031107.D	08/03/2018 00:26
C0AD1	J4178-08	PR031108.D	08/03/2018 00:40
C0AD2	J4178-09	PR031109.D	08/03/2018 00:55
C0AD2MS	J4178-10MS	PR031110.D	08/03/2018 01:09
C0AD2MSD	J4178-11MSD	PR031111.D	08/03/2018 01:23
C0AC8DL	J4178-05DL	PR031131.D	08/03/2018 11:41
C0AD0DL	J4178-07DL	PR031133.D	08/03/2018 12:10
C0AD1DL	J4178-08DL	PR031134.D	08/03/2018 12:25
C0AC7DL	J4178-04DL	PR031323.D	08/08/2018 14:57
C0AC9DL	J4178-06DL	PR031326.D	08/08/2018 15:41
C0AD2DL	J4178-09DL	PR031327.D	08/08/2018 15:55

IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

C0AB8

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-02  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/02/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ): ug/Kg

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor-1254	1	6.79	6.72	6.86	13.9582	22	28.90 *
COLUMN 1	2	7.07	7.00	7.14	13.9897		
	3	7.16	7.09	7.23	17.4064		
	4	7.44	7.37	7.51	25.1216		
	5	7.71	7.64	7.78	39.3160		
	1	5.68	5.61	5.75	15.4461		
COLUMN 2	2	5.99	5.92	6.06	13.1946		
	3	6.30	6.23	6.37	21.1302		
	4	6.61	6.54	6.68	17.3198		
	5	6.71	6.64	6.78	18.0835		

IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

C0AC7

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-04  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/02/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ):  $\mu\text{g/Kg}$

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor-1254	COLUMN 1	1	6.80	6.72	6.86	16415.8008	18000
		2	7.08	7.00	7.14	22631.1992	
		3	7.17	7.09	7.23	13695.0996	
		4	7.45	7.37	7.51	16449.6992	
		5	7.72	7.64	7.78	22996.1992	
	COLUMN 2	1	5.66	5.61	5.75	9195.4102	65.50 *
		2	6.00	5.92	6.06	11380.2002	
		3	6.32	6.23	6.37	10836.9004	
		4	6.62	6.54	6.68	13249.7002	
		5	6.73	6.64	6.78	11034.4004	

IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

C0AC8

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-05  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/02/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ): ug/Kg

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor-1254	1	6.79	6.72	6.86	7237.7798	8400	36.60 *
COLUMN 1	2	7.07	7.00	7.14	8891.4697		
	3	7.16	7.09	7.23	7549.4302		
	4	7.44	7.37	7.51	8234.8604		
	5	7.71	7.64	7.78	9926.1201		
	1	5.68	5.61	5.75	5299.2798		
COLUMN 2	2	5.99	5.92	6.06	6307.2700		
	3	6.30	6.23	6.37	5522.2598		
	4	6.61	6.54	6.68	7201.7202		
	5	6.71	6.64	6.78	6307.6299		

IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

C0AC9

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-06  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/03/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ):  $\mu\text{g/Kg}$

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor-1254	COLUMN 1	1	6.80	6.72	6.86	16909.0000	19000
		2	7.08	7.00	7.14	24997.9004	
		3	7.17	7.09	7.23	14220.2002	
		4	7.45	7.37	7.51	15878.0000	
		5	7.72	7.64	7.78	24216.9004	
	COLUMN 2	1	5.66	5.61	5.75	9013.4902	74.90 *
		2	6.00	5.92	6.06	11258.9004	
		3	6.33	6.23	6.37	10694.9004	
		4	6.59	6.54	6.68	13108.9004	
		5	6.69	6.64	6.78	10952.0000	

IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

C0AD0

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-07  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/03/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ): ug/Kg

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor-1254	1	6.79	6.72	6.86	920.1440	1800	84.70 *
COLUMN 1	2	7.05	7.00	7.14	4744.4199		
	3	7.16	7.09	7.23	944.5460		
	4	7.44	7.37	7.51	979.3730		
	5	7.71	7.64	7.78	1591.5900		
	1	5.68	5.61	5.75	899.9210		
COLUMN 2	2	5.98	5.92	6.06	850.5190		
	3	6.30	6.23	6.37	789.9040		
	4	6.61	6.54	6.68	928.9180		
	5	6.70	6.64	6.78	1500.4600		

FORM 10B-OR  
 IDENTIFICATION SUMMARY  
 FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

C0AD0DL

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-07DL  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/03/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ): ug/Kg

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor-1254	1	6.79	6.72	6.86	1076.2700	1800	69.00 *
COLUMN 1	2	7.05	7.00	7.14	4762.0000		
	3	7.15	7.09	7.23	1048.7600		
	4	7.44	7.37	7.51	1058.0000		
	5	7.71	7.64	7.78	1242.1300		
	1	5.68	5.61	5.75	899.7400		
COLUMN 2	2	5.98	5.92	6.06	970.5110		
	3	6.30	6.23	6.37	902.8480		
	4	6.61	6.54	6.68	1096.2200		
	5	6.70	6.64	6.78	1568.3101		

FORM 10B-OR  
IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

C0AD1

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-08  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/03/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ): ug/Kg

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor 1254	1	6 79	6 72	6 86	3812 0701	4000	23 00
COLUMN 1	2	7 07	7 00	7 14	6009 9302		
	3	7 16	7 09	7 23	3630 6399		
	4	7 44	7 37	7 51	2833 1201		
	5	7 71	7 64	7 78	3890 2500		
	1	5 68	5 61	5 75	3744 0601		
COLUMN 2	2	5 98	5 92	6 06	3591 1101		
	3	6 30	6 23	6 37	2162 8601		
	4	6 61	6 54	6 68	2736 5100		
	5	6 71	6 64	6 78	4166 2202		
Aroclor-1260	1	7.32	7.25	7.39	3624.8601	3400	35.80 *
COLUMN 1	2	7.57	7.50	7.64	3517.4199		
	3	7.86	7.78	7.92	5714.9902		
	4	8.15	8.09	8.23	3039.8701		
	5	8.48	8.41	8.55	1288.7900		
COLUMN 2	1	6.20	6.13	6.27	4029.5601		
	2	6.38	6.31	6.45	3289.4700		
	3	6.53	6.46	6.60	3294.0300		
	4	6.99	6.93	7.07	985.0430		
	5	7.23	7.17	7.31	1061.4500		

IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

C0AD2

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-09  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/03/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ): ug/Kg

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor-1254	1	6.80	6.72	6.86	20455.8008	23000	75.30 *
COLUMN 1	2	7.08	7.00	7.14	29175.1992		
	3	7.17	7.09	7.23	16507.4004		
	4	7.45	7.37	7.51	18639.1992		
	5	7.72	7.64	7.78	28262.1992		
	1	5.66	5.61	5.75	10730.2998		
COLUMN 2	2	6.00	5.92	6.06	13157.4004		
	3	6.32	6.23	6.37	12624.7002		
	4	6.61	6.54	6.68	15267.2998		
	5	6.73	6.64	6.78	12700.2002		

FORM 10B-OR  
IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

C0AD2MS

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-10MS  
 Instrument ID (1): ECD\_R Date(s) Analyzed: 08/03/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ):  $\mu\text{g/Kg}$

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor 1016	COLUMN 1	1	5 26	5 19	5 33	3366 9600	11000
		2	5 45	5 39	5 53	8419 7305	
		3	5 72	5 65	5 79	8986 7598	
		4	5 81	5 74	5 88	4710 4399	
		5	6 20	6 13	6 27	30507 5000	
	COLUMN 2	1	4 35	4 28	4 42	3293 8501	9600
		2	4 75	4 68	4 82	8620 6504	
		3	4 75	4 70	4 84	10807 5996	
		4	4 82	4 76	4 90	4738 1201	
		5	5 20	5 12	5 26	20304 5996	
Aroclor-1254	COLUMN 1	1	6.80	6.72	6.86	17853.8008	20000
		2	7.08	7.00	7.14	24536.5000	
		3	7.17	7.09	7.23	14888.7998	
		4	7.45	7.37	7.51	16848.4004	
		5	7.72	7.64	7.78	24784.0000	
	COLUMN 2	1	5.66	5.61	5.75	10103.4004	12000
		2	6.00	5.92	6.06	12382.2998	
		3	6.32	6.23	6.37	11610.5996	
		4	6.61	6.54	6.68	14176.0000	
		5	6.73	6.64	6.78	11901.5000	
Aroclor-1260	COLUMN 1	1	7.32	7.25	7.39	17457.0996	14000
		2	7.58	7.50	7.64	13917.4004	
		3	7.86	7.78	7.92	19008.4004	
		4	8.15	8.09	8.23	14910.5996	
		5	8.49	8.41	8.55	3328.4399	
	COLUMN 2	1	6.22	6.13	6.27	13411.4004	7000
		2	6.39	6.31	6.45	7739.7900	
		3	6.52	6.46	6.60	8649.1104	
		4	6.99	6.93	7.07	2463.0701	
		5	7.23	7.17	7.31	2667.0801	

FORM 10B-OR  
IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

C0AD2MSD

Lab Name: Chemtech Consulting Group Contract: EPW14030  
 Lab Code: CHM Case No. 47768 MA No.: \_\_\_\_\_ SDG No.: C0AB7  
 Analytical Method: ARO Lab Sample ID: J4178-11MSD  
 Instrument ID (1): ECD\_R Date(s) Analyzed : 08/03/2018  
 Instrument ID (2): ECD\_R  
 GC Column(1): ZB-MR1 ID: 0.32 (mm) GC Column(2): ZB-MR2 ID: 0.32 (mm)  
 Concentration Units ( $\mu\text{g/L}$ ,  $\text{mg/L}$ ,  $\mu\text{g/kg}$ ): ug/Kg

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION		%D
			FROM	TO	PEAK	MEAN	
Aroclor 1016	COLUMN 1	1	5 26	5 19	5 33	3113 8601	11000
		2	5 45	5 39	5 53	7800 3101	
		3	5 72	5 65	5 79	8394 0801	
		4	5 81	5 74	5 88	4347 7798	
		5	6 20	6 13	6 27	28854 3008	
	COLUMN 2	1	4 35	4 28	4 42	3037 7200	9200
		2	4 75	4 68	4 82	7573 4102	
		3	4 75	4 70	4 84	10898 7998	
		4	4 82	4 76	4 90	4393 7100	
		5	5 20	5 12	5 26	19895 3008	
Aroclor-1254	COLUMN 1	1	6.80	6.72	6.86	17524.0996	19000
		2	7.08	7.00	7.14	24059.1992	
		3	7.17	7.09	7.23	14732.4004	
		4	7.45	7.37	7.51	16549.3008	
		5	7.72	7.64	7.78	24389.6992	
	COLUMN 2	1	5.66	5.61	5.75	10081.5996	12000
		2	6.00	5.92	6.06	12178.0996	
		3	6.32	6.23	6.37	11493.9004	
		4	6.62	6.54	6.68	14214.9004	
		5	6.73	6.64	6.78	11768.5996	
Aroclor-1260	COLUMN 1	1	7.32	7.25	7.39	16795.6992	13000
		2	7.57	7.50	7.64	13612.0000	
		3	7.86	7.78	7.92	18680.1992	
		4	8.15	8.09	8.23	14576.5996	
		5	8.49	8.41	8.55	3797.9600	
	COLUMN 2	1	6.22	6.13	6.27	13228.0996	6900
		2	6.39	6.31	6.45	7574.3999	
		3	6.52	6.46	6.60	8483.9004	
		4	7.00	6.93	7.07	2484.4600	
		5	7.23	7.17	7.31	2736.6799	



## US EPA Region 3 Analytical Request (ARF) Report

CT Number: CT8495Date Receipt: 07/12/2018Sample(s) Shipping DatesStart: 07/23/2018End: 08/17/2018ARF Status: IN PROGRESSSite: SHILOH CHURCH ROAD SITESite Activity: REMOVAL ASSESSMENT (RS)Program: SUPERFUND (RAS  
AND/OR DAS)Street: Non-responsive based on revised scope SHILOH CHURCH ROADCity: NATHALIEState: VA Zip: 24577Account No: 2018-T-03-N-303DC6-A38Q-RS-00SPILL ID: A38QOPERABLE UNIT: 00

EPA ID (aka CERCLIS):

QA Title:

QA Date Approved:

EPA Project Lead: CHRIS WAGNER Phone: 804-698-4164 Cell Phone #: - - E-mail: WAGNER.CHRISTINE@EPA.GOV

Site Leader: Non-responsive based on revised scope Phone: Non-responsive based on revised scope Cell Phone #: Non-responsive based on revised scope E-mail: Non-responsive based on revised scopeRequest Preparer: Non-responsive based on revised scope Phone: Non-responsive based on revised scope Cell Phone #: Non-responsive based on revised scope E-mail: Non-responsive based on revised scopeContractor: WESTON SOLUTIONS EPA CO/PO: RYAN PARKER Equivalent method substitution allowed: YES

Special Instructions:

WATER SAMPLES WILL INCLUDE BOTH GROUNDWATER AND SURFACE WATER SAMPLES  
SAMPLING WILL BE SPLIT INTO TWO DIFFERENT WEEKS, SOIL/SEDIMENT SAMPLING, ASSOCIATED QC SAMPLING, AND SURFACE WATER SAMPLING IS SCHEDULED FOR THE WEEK OF JULY 23 GROUNDWATER SAMPLING AND POTENTIALLY ANY REMAINING SURFACE WATER SAMPLING IS SCHEDULED FOR THE WEEK OF AUGUST 13

Comments:

DAS	RAS	Lab Assigned	QTY	Matrix	Parameter	Requested Method	Accepted Method	Validation Level	Unvalidated Data Due	Final Report Due	EDD Required
	47768	CHM	50	SOIL/SEDIMENT	VOLATILE ORGANIC COMPOUNDS (VOC)	SOM02 4 (LOW/MID)	SOM02 4 (LOW/MID)	M3	21	45	Y
	47768	CHEM	50	SOIL/SEDIMENT	SEMIVOLATILES (SVOCS)	SOM02 4	SOM02 4	M3	21	45	Y
	47768	CHEM	50	SOIL/SEDIMENT	PCB AROCLORS	SOM02 4	SOM02 4	M3	21	45	Y
	47768	BON	50	SOIL/SEDIMENT	METALS (TOTAL)	ISM02 4 ICP-AES	ISM02 4 ICP-AES	IM2	21	45	Y
	47768	CHEM	9	WATER	VOLATILE ORGANIC COMPOUNDS (VOC)	SOM02 4 (LOW/MID)	SOM02 4 (LOW/MID)	M3	21	45	Y
	47768	CHEM	9	WATER	SEMIVOLATILES (SVOCS)	SOM02 4	SOM02 4	M3	21	45	Y
	47768	CHEM	9	WATER	PCB AROCLORS	SOM02 4	SOM02 4	M3	21	45	Y
	47768	BON	9	WATER	METALS (TOTAL)	ISM02 4 ICP-AES	ISM02 4 ICP-AES	IM2	21	45	Y
	47768	BON	9	WATER	MERCURY (TOTAL)	ISM02 4	ISM02 4	IM2	21	45	Y
	47768	CHEM	8	DRINKING WATER	VOLATILE ORGANIC COMPOUNDS (VOC) TRACE	SOM02 4 (TRACE)	SOM02 4 (TRACE)	M3	21	45	Y



## US EPA Region 3 Analytical Request (ARF) Report

CT Number: CT8495Date Receipt: 07/12/2018

Sample(s) Shipping Dates

Start: 07/23/2018End: 08/17/2018ARF Status: IN PROGRESS

DAS	RAS	Lab Assigned	QTY	Matrix	Parameter	Requested Method	Accepted Method	Validation Level	Unvalidated Data Due	Final Report Due	EDD Required
	47768	CHEM	8	DRINKING WATER	SEMIVOLATILES (SVOCS)	SOM02 4	SOM02 4	M3	21	45	Y
	47768	CHEM	8	DRINKING WATER	PCB AROCLORS	SOM02 4	SOM02 4	M3	21	45	Y
	47768	BON	8	DRINKING WATER	METALS (TOTAL)	ISM02 4 ICP-MS	ISM02 4 ICP-MS	IM2	21	45	Y
	47768	BON	8	DRINKING WATER	MERCURY (TOTAL)	ISM02 4	ISM02 4	IM2	21	45	Y
	47768	CHEM	9	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	VOLATILE ORGANIC COMPOUNDS (VOC) TRACE	SOM02 4 (TRACE)	SOM02 4 (TRACE)	M3	21	45	Y
	47768	CHEM	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	SEMIVOLATILES (SVOCS)	SOM02 4	SOM02 4	M3	21	45	Y
	47768	CHEM	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	PCB AROCLORS	SOM02 4	SOM02 4	M3	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	METALS (TOTAL)	ISM02 4 ICP-AES	ISM02 4 ICP-AES	IM2	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	MERCURY (TOTAL)	ISM02 4	ISM02 4	IM2	21	45	Y
	47768	BON	9	WATER	METALS (DISSOLVED)	ISM02 4 ICP-AES	ISM02 4 ICP-AES	IM2	21	45	Y
	47768	BON	9	WATER	MERCURY (DISSOLVED)	ISM02 4	ISM02 4	IM2	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	METALS (DISSOLVED)	ISM02 4 ICP-AES	ISM02 4 ICP-AES	IM2	21	45	Y
	47768	BON	5	QC BLANKS(FIELD, EQUIP, TRIP, RIN)	MERCURY (DISSOLVED)	ISM02 4	ISM02 4	IM2	21	45	Y
	47768	BON	50	SOIL/SEDIMENT	MERCURY (TOTAL)	ISM02 4	ISM02 4	IM2	21	45	Y

**Data Validation Report****Calibration Outliers**

Fri, 17

Aug

2018

12:46:12

Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

**Method:** Semivolatiles**Instrument:** BNA\_M**Column:** ZB-GR**Run Batch:** BM015938.D

QC Type	Analysis ID	Analysis Type	File ID	Analysis Date	Analyte	Outlier Type	Reported value	Expected Value
Continuing Calibration Verification	SSTD02057	RRF020	BM016171.D	08/03/2018 09:12:00	Fluoranthene	CCAL %D	-23.3	-20 AND 20
Continuing Calibration Verification	SSTD02057	RRF020	BM016171.D	08/03/2018 09:12:00	Butylbenzylphthalate	CCAL %D	30.8	-25 AND 25
Continuing Calibration Verification	SSTD02057	RRF020	BM016171.D	08/03/2018 09:12:00	Bis(2-ethylhexyl)phthalate	CCAL %D	26.3	-25 AND 25

# Data Validation Report

## Calibration Outliers

Page 2

Fri, 17

Aug

2018

12:46:12

Project Name: SHILO CHURCH ROAD SITE Project

GroupID: 47768/EPW14030/C0AB7

Lab Name: Chemtech Consulting Group

Submission Group Id: 30411862

Organization: EPA Region 3

SOW: SOM02.4

Method: Semivolatiles

Instrument: BNA\_N

Column: ZB-GR

Run Batch: BN002028.D

QC Type	Analysis ID	Analysis Type	File ID	Analysis Date	Analyte	Outlier Type	Reported value	Expected Value
Initial Calibration	SSTD00501	Initial Calibration	BN002028.D	07/13/2018 11:32:00	Fluoranthene	ICAL %RSD	20.2	20

**ESAT DATA VALIDATION EVALUATION CHECKLIST**  
**Contract # EP-W-13-023**

TDF #:0818117

Revision: 0

Case #: 47768

SDG: C0AB7

Site Name: Shiloh Church Road

Parameter(s): SV/ Aroclor

Method(s): S0M02.4

Laboratory: CHM

Reviewer: Non-responsive based on revs

Date Submitted to EPA:

EPA RPM/OSC: Chris Wagner

Number of hours spent on review: 11

cc: Non-responsive based on revised scope (Weston Solutions)

Number of Samples/Aliquots: 9/20

Validation Level/Stage: M3/S4VEM

EDD: Yes

<u>CRITERIA</u>	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
Format according to Region III protocol	_____	_____	_____
Clarity of report	_____	_____	_____
Qualifiers applied correctly	_____	_____	_____
Consistency between narrative and data summary form(s)	_____	_____	_____
Error-free transcription	_____	_____	_____
<b><u>EFFICIENCY OF CONTRACTOR</u></b>			
Approval recommended for current submission	_____	_____	_____
Time spent on review is reasonable	_____	_____	_____
Technical Evaluation	_____	EPA Oversight	

<u>ESD OVERSIGHT DATES</u>	<u>TPO</u>	<u>Oversight</u>	<u>ESAT</u>
Received at EPA	_____	_____	_____
Oversight assigned	_____	_____	_____
Oversight received	_____	_____	_____
Oversight completed	_____	_____	_____
Feedback given	_____	_____	_____
Mailed to RPM	_____	_____	_____

# Data Validation Checklist

Task Order #: 0002	TDF #: 0818117	Revision #: 0	Case/DAS #: 47768
Site Name: Shiloh Church Road		SDG #: C0AB7	
Analysis Type: Organic		SOW #: SOM02.4	
Reviewer: <small>Non-responsive based on rev</small>			
CLP Laboratory Code: CHM			

Peer Reviewer: \_\_\_\_\_ Due Date: \_\_\_ 9/25/18 \_\_\_\_\_

## Data Validation Checklist - General

CRITERIA	CHECK	COMMENTS
<b>EPA Oversight Checklist</b>		
TDF #	<input type="checkbox"/>	
Case #	<input type="checkbox"/>	
SDG #	<input type="checkbox"/>	
Site Name	<input type="checkbox"/>	
Laboratory	<input type="checkbox"/>	
EPA CLP TPO	<input type="checkbox"/>	
EPA OSC/RPM	<input type="checkbox"/>	
Validation Type	<input type="checkbox"/>	
<b>Narrative</b>		
Report Header	<input type="checkbox"/>	
Report Footer	<input type="checkbox"/>	
<b>Overview</b>		
Laboratory	<input type="checkbox"/>	
Analytical method	<input type="checkbox"/>	
Analytical services program	<input type="checkbox"/>	
NFG reference	<input type="checkbox"/>	
Validation level	<input type="checkbox"/>	
Data package receipt date	<input type="checkbox"/>	
<b>Criteria</b>		
Qualifier list	<input type="checkbox"/>	
<b>Appendix A</b>		
Regional COC	<input type="checkbox"/>	
EPA ARF	<input type="checkbox"/>	
<b>Appendix B</b>		
Laboratory narrative	<input type="checkbox"/>	
<b>Appendix C</b>		
EXES report	<input type="checkbox"/>	

General Comments:

Peer Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

# Data Validation Checklist

Task Order #: 0002	TDF #: 0818117	Revision #: 0	Case/DAS #: 47768
Site Name: Shiloh Church Road		SDG #: C0AB7	
Analysis Type: Organic		SOW #: SOM02.4	
Reviewer: <small>Non-responsive based on rev</small>			
CLP Laboratory Code: CHM			

## Technical - Organics

Section	Check	Comments
Overview	<input type="checkbox"/>	
Matrix and # of samples	<input type="checkbox"/>	
Field QC samples	<input type="checkbox"/>	
Summary	<input type="checkbox"/>	
Major problems	<input type="checkbox"/>	
Minor problems	<input type="checkbox"/>	
Notes	<input type="checkbox"/>	
Compounds below CRQL	<input type="checkbox"/>	
Blank contaminants	<input type="checkbox"/>	
Field Duplicates	<input type="checkbox"/>	
Field/Trip Blanks	<input type="checkbox"/>	
Dilutions	<input type="checkbox"/>	
Carryover	<input type="checkbox"/>	
Manual integration	<input type="checkbox"/>	
TICs	<input type="checkbox"/>	
SSRs/Form Is	<input type="checkbox"/>	
EDD	<input type="checkbox"/>	

DV Item	Check	Qualifier Applied	Comments
Preservation/Holding Time	<input type="checkbox"/>		
Instrument Performance Check	<input type="checkbox"/>		
Initial Calibration	<input type="checkbox"/>		
Continuing Calibration	<input type="checkbox"/>		
Blanks	<input type="checkbox"/>		
DMCs/Surrogates	<input type="checkbox"/>		
MS/MSDs	<input type="checkbox"/>		
LCS/LCSDs	<input type="checkbox"/>		
Internal Standards	<input type="checkbox"/>		
Other:	<input type="checkbox"/>		

General Comments:

Peer Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_